Urban District Council

OF

Esher and The Dittons.

TENTH

Annual Report

OF THE

Medical Officer of Health,

For the Year 1904.

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

Thames Ditton,
Surrey,
February, 1905.

To the Chairman and Members of the Urban District Council of Esher and the Dittons.

Gentlemen,

I have the honour to present to you my Annual Report on the sanitary condition and the health of the District during the past year.

I am glad to be able to say that there has been no serious outbreak of any infectious disease during the year, and that it was not necessary at any time to advise the Council to close the schools in the District. It is now almost two years since either Measles or Whooping Cough assumed an epidemic character among the children, and to the absence of these to some extent must be attributed the good health among the younger part of the population. Later on in this Report I am dealing with the cases of infectious disease in more detail.

VITAL STATISTICS.

The subject of vital statistics is always one that seems to be of interest only to the specialist, but it is a most important means of showing the healthiness or otherwise of a district. At the end of this Report will be found the usual tables which give these statistics in a clear form, and possibly the most important of these is Table IV, in which the ages at death are set out. From this it will be seen at a glance that the majority of deaths took place at the two extremes of life. There are also 31 deaths included in the 25 to 65 age period, but in drawing these figures up I found that the deaths in this period were chiefly those of persons at or near the age of 50 years.

The total number of deaths registered in the District was 94, and of these two persons were "non-residents," and for the purpose of estimating the rate have to be deducted; the deaths of residents who died outside the district have to be added, these number 15, thus bringing the total number to 107. I estimate that at the middle of 1904 there were 9,787 persons living in the District, and with this population the number of deaths mentioned gives an annual death-rate of 10·9 per 1,000 persons living.

The number of births registered as having taken place in the District is 248, and with the population mentioned shows a birth-rate of 25·3 per 1,000. Table I. contains these figures and also the average numbers for the District since 1896, and from this table it will be seen that 27 children died before attaining the age of one year, which gives an "Infant Mortality" figure of 108·8: this means, that out of 1,000 babies born in the year, if there had been as many, over 108 would have died during the first year of life. Most people are more accustomed to the use of percentage, and another way of putting the same thing is to say that nearly 11 per cent.

of the infants born do not reach the age of one year. For this District this figure is quite high enough, but in the table below it will be seen that in England and Wales the death or Infant Mortality rate reaches 146 per 1,000 births registered. I suppose the most difficult questions that sanitarians have to cope with is this one of Infant Mortality; and of all the suggested remedies none seems to be of any avail. As in other parts of the County of Surrey cards are continually being given to the mothers of children in the hope that something may be done to deal with the hopeless state of ignorance of the "young mother." There have been only two deaths from the class of diseases that are known as Zymotic, and the death-rate is so small a fraction that it is practically negligable.

Annual Birth-rates and Death-rates from the Seven Chief Epidemic Diseases.

	Annual Rates per 1,000 Living.			Infant Mortality, Annual Death-rate of Infants under 1 Year per 1,000 Births.
	Births.	Deaths from all Causes.	Deaths from Seven Chief Epidemic Diseases.	
England and Wales ...	27.9	16.2	1.94	146
Rural England and Wales	26.8	15.3	1.28	125
76 great Towns ...	29 1	17.2	2.49	160
142 smaller Towns ...	27.5	15.6	2.02	154

In this table, which is the one published by the Registrar-General of births and deaths, the figures given for the smaller towns are those which are nearest to those of our own District, and with which a favourable comparison can be made.

INQUESTS.

From the returns of Dr. Taylor, the Coroner for the Kingston District of Surrey, I am able to report that there were 12 inquests held in the parishes of Long Ditton and Thames Ditton, including Claygate. He says in the report that the number of children whose deaths are caused or accelerated by improper feeding is on the increase.

INFECTIOUS DISEASE.

The total number of notifications of infectious disease was 30 for the year, just one more than for 1903. There was no extensive outbreak but only short runs of isolated cases. At the time of writing my Report for 1903, I was engaged in doing all that was possible to prevent the further spread of Diphtheria in Claygate, and I am glad to say that the notifications soon ceased.

On receipt of information of a case of infection an effort is made to get the case removed to the Isolation Hospital, and this is especially the case when the patient is in one of the cottage type of house where there is insufficient accommodation for proper treatment. As soon as it can be managed after the removal of such a case, the room is disinfected, either by the use of a spray of formaline or by formaline vapour, or occasionally by burning sulphur in the room. The bedding, etc., is disinfected by soaking in some disinfecting solution, usually carbolic acid. When there are special reasons for a more thorough disinfection, as after cases of Scarlet or Enteric Fever, treated at home, I give instructions to have all bedding disinfected by steam at the Isolation Hospital. I hope that, as soon as the growth of the District will warrant the Council spending the money, it will be possible to have a disinfector and also a destructor for the use of the District. At the present time I do not think there is sufficient call for either of these, but have no doubt that in the course of a few years this matter will come before the Council.

GENERAL SANITARY CONDITION.

The same system of house to house inspection has been continued throughout the year and has resulted in many minor improvements in the cottage type of house. As a result of this work it is now quite the exception to find a house without a proper sanitary dust bin, which enables householders to keep their premises cleaner, and also to a considerable extent facilitates the weekly collection of house refuse. It is only seldom that a complaint is made about non-removal of this form of refuse. After collection the refuse, etc., is carted to the brickfields at Claygate, where it is used in the burning of bricks. The importation of London refuse into the District still continues, but by agreement between the owners of the brickfields, the Railway Company and the Council, this is now restricted to the winter months, and every care is taken to prevent any nuisance in the process of carting it through the village.

There are special improvements to note in the draining of two old cottages in Red Lane, Claygate, where it was also necessary to provide a new water supply in place of an old and polluted well.

At Ditton Hill two old and insanitary privies have been replaced by good pail closets, and as far as can be ascertained these two were the last of that class in the whole District. The small tenements in Bear Court, Esher, have been thoroughly renovated and repaired, though it is quite impossible to make them into really good cottages owing to their bad construction and situation.

There were a large number of cheap and inefficient flushing tanks in use in the District, and now, whenever possible, these are being replaced by ones of a better type. This should be of great benefit to the residents, and is certainly an improvement from a sanitary point of view.

The intermittent water supply still remains in parts of Thames Ditton and Long Ditton. I have advised the Council to ask the assistance of the County Council in order to get a constant supply throughout the whole District. In the absence of sufficient storage of water the intermittent supply leads to all kinds of insanitation and also causes not a little inconvenience to the occupiers of small houses.

I received complaints as to the condition of the churchyard at Claygate, and on inspection found that, in spite of the action that had been taken by the Council in former years, no additional accommodation had been procured, and in consequence the ground was full. This was reported to the Local Government Board and an enquiry held, which has resulted in the ground being closed for further burials.

FACTORIES AND WORKSHOPS ACT, 1901.

The register required to be kept under this Act contains the names and addresses of 123 persons who occupy factories and workshops, under the following definitions:—

Factories and other places where mechanical power is used	13
Workshops of house and boat builders, including other trades such as wheelwrights, cabinet makers, smiths, etc. (no mechanical power)	22
Workrooms of dressmakers and similar trades ...	15
Laundries, chiefly of the cottage type	65
Bakehouses	8

The number of visits made by the Sanitary Inspector and myself are more than 200, and in response to written and verbal requests 14 workrooms, etc., have been lime-washed and cleansed and eight sanitary appliances have been repaired.

In addition, all the bakehouses have been limewashed twice during the year, as required by the Act. There is one underground bakehouse in the District, and the necessary certificate for its continued use has been granted by the Council. The sanitary condition of this and all the other bakehouses in the District is very satisfactory, and I find that occupiers are always ready and willing to do what is asked in order to comply with the requirements of the Act.

DAIRIES AND COWSHEDS.

I am glad to be able to report that these are for the most part kept in an excellent state of cleanliness, and that the periodic limewashing is carried out regularly. Still, I could wish to see a higher idea of cleanliness put into practice by the keepers of dairy farms; too much stress is laid on the milk-producing power of the cow, and the quality of the milk is apt to be overlooked. Hence every device that can increase the quantity of milk is employed: cows are kept in close sheds, and given a diet known to stimulate the supply, their exercise is restricted, and in fact all the rules of hygiene are set at naught. If the public could realize the fact that only good milk is nutritious, and insist on having it from a source that is without doubt pure, the cowkeepers would soon learn that it is not to their advantage to practise what must or ought to be described as antiquated means of forcing the supply of milk. The enforcement of byelaws is one means of ensuring that the supply of milk is pure, but it is by no means the only one or that of the greatest value; and frequent veterinary inspection of cattle to ensure the absence of tuberculosis among the animals, and the adoption of daily grooming and cleansing the skin and washing the teats of the cows, are sure means of improving the condition of milk supply. Another measure which I am sure would be of some value would be for cowkeepers to insist on the proper cleansing of the milkers' hands both before and during the process of milking the animals.

I am convinced that one of the most important means of reducing the enormous Infant Mortality of the country is a more strict supervision of the conditions under which milk is produced and sold to the public, and this is largely in the hands of the public if only they would insist on seeing the actual state of the cowsheds for themselves.

The Regulations for the control of Dairies, Milkshops and Cowsheds, which had been in force since August 1st, 1887, have now been replaced by a new set founded on the Model Regulations issued by the Local Government Board; these took effect on January 1st, 1905. I hope that these new byelaws will prove of advantage, especially by providing a good standard of air-space for cattle and by the clauses defining rules for cleansing the udder and teats of cows when being milked, and for insuring the proper cleansing of the milkers' hands. There are also modifications in the requirements for limewashing the insides of all cowsheds, which I think cannot but prove of assistance in raising the standard of cleanliness.

MAIN DRAINAGE.

In my Report for last year I mentioned that the sewer in part of the District was found to be defective, and to such an extent that the house drains in the lower parts were liable to be flooded in wet weather. The work of laying a new sewer from the outfall works to the village of Thames Ditton is now being begun. This is to be a gravitating one, and will thus obviate the use of pumps. I am glad to be able to say that the defective condition of the sewer has not had any bad influences on the public health, though it necessitated more frequent inspection of the houses in that part where the drains were liable to flooding. No doubt the very considerable dilution of the sewage by ground water has contributed to this immunity.

TUBERCULOSIS.

During the past year eight deaths have been registered as being caused by this disease, and among medical authorities this is now regarded as a preventible form of sickness. It is responsible for about ten per cent. of the whole mortality of the kingdom and it is necessary to consider what means can be taken to prevent the spread of it. The first measure is that of improving the sanitation of the houses by attention to the ventilation of the rooms, the drainage, and proper supply of good wholesome food. I think that the paving of the back yards cottages in the more crowded parts of the District would be of advantage in keeping the sites on which houses stand drier and more clean; but there are other means that can be employed. In order to stop the disease it is most important that it should be recognised in its early stage, even before the well known signs have appeared; without some means of bacteriological diagnosis this cannot be done, and I think, as in other infectious diseases, it might be arranged that the Council would undertake to do this, by sending material to the Clinical Research Association, and paying the cost out of the rates.

Another measure that would prove of value is the adoption of a system of voluntary notification, which would mean that each case came to some extent under the observation of the Medical Officer. It would then be possible to give instructions as to the disinfection of the sputum, which is in every case a source of danger to the other inhabitants of the house. It would be necessary to pay the doctor notifying the case the usual fee for the certificate. There is still another means of stopping infection and that is the systematic practice of thorough disinfection after the death or removal of a patient. It is specially desirable that there should be not only disinfection but a thorough cleansing of a room that has been long occupied by a person sick of this disease, and at the present time this is often done, but I think its regular adoption would certainly prove of benefit.

There is at the end of this report a table showing the various details that have received attention under the Factory and Workshop Act, which I think proves that this part of the duties of a sanitary authority is not being overlooked.

In closing this Report I have much pleasure in thanking the Sanitary Inspector, Mr. G. Over, for his help in the administration of the District, as well as for much detailed information for this Report.

I am, Gentlemen,

Your obedient servant,

A. SENIOR, M.B., D.P.H.

Medical Officer of Health.

THE URBAN DISTRICT COUNCIL OF ESHER AND THE DITTONS.

BRABANT VILLA,
THAMES DITTON,
JANUARY, 1905.

To Dr. A. Senior, D.P.H.,
Medical Officer.

SIR,

I have pleasure in submitting to you my second Annual Report relating to the detail administration of the Sanitary Department, and giving a summary of the work carried out within the Urban District under the various Acts and Regulations in force during the year ending December, 1904.

THE PUBLIC HEALTH ACT, 1875.

Under the provisions of this Act, much time and attention has been devoted to house to house inspection work, especially in the thickly populated cottage areas. In the early part of the year some cottages at Claygate and the Clump Meadows, which remained undealt with at the time of my last Report, were systematically inspected, the result being the abatement of a number of minor nuisances of the kind usually met with.

All small cottage property in the District has been visited at least once during the year, re-inspections being made where necessary; the resulting improvements are set forth at the end of this Report, in the summary of works executed.

DUST COLLECTION AND RECEPTACLES.

The weekly removal system now in operation throughout the District continues to give general satisfaction, during the year complaints as to non-collection have been few and far between.

A number of the old-fashioned brick pits still exist in parts of the District, the brickwork and joints of these in many cases being old and porous and the coverings defective, they are not conducive to sanitation. Whenever an opportunity occurs for the abolition of one of these it is promptly taken advantage of and a portable sanitary bin with lid substituted. During the year 86 of these latter have been provided by various owners in place of those found broken, missing, or otherwise defective.

CLEANSING, ETC., OF COTTAGES.

In response to requests made for the cleansing of various dwellings and rooms where this was badly needed, ten cottages were dealt with throughout, and in twelve instances living and other rooms were cleansed and limewashed.

PRIVATE HOUSE DRAINAGE.

As will be seen in the summary at the end of this Report, 11 cases of blocked drainage came to my notice during the year, three of the most serious were in connection with combined drainage systems, the remaining eight occurred at premises responsible for their own drainage only.

Nine drainage systems were subjected to a test, and in one case at Thames Ditton the drainage at trade premises was entirely re-laid.

PUBLIC-HOUSE URINALS.

An inspection was made of the urinals attached to licensed houses throughout the District, they were found generally in a satisfactory condition of cleanliness, such matters as limewashing and cleansing received attention where necessary, and at Weston Green a new properly built structure was erected in place of an old insanitary urinal.

SLAUGHTER-HOUSES.

These have been supervised as far as the Council's powers admit. On the occasions of my visits they have been found reasonably clean, and nothing of an offensive nature has been permitted to remain on the premises. Requests for limewashing were made and complied with in several instances.

ELEMENTARY SCHOOLS.

I have made a number of visits to the schools for the purpose of inspecting the lavatories and sanitary appliances, on each occasion the places were found clean and in order, and all compartments were limewashed during the summer vacation.

COMPLAINTS.

Thirty-four written complaints were received at these offices relating to such nuisances as bad smells, offensive accumulations, dirty dwellings, defective sanitary appliances, etc., each complaint was dealt with in an appropriate manner.

The total number of inspections under the Public Health Act, including cottages, various premises, schools and miscellaneous other places amount to	1,164
The re-inspections arising out of same being ...	445

NUISANCE FROM SMOKE SHAFTS.

During the early part of the year representation was made to the Council by the Smoke Abatement Society that an undue amount of smoke was permitted to escape from the shafts of the Lambeth Water Company, Long Ditton.

I was instructed to take some observations; this I did and reported the result on several occasions to the Council. Communications were addressed to the Water Company, and in due course the nuisance complained of was considerably abated. Although at the present time smoke is frequently seen issuing from the shafts, I am of opinion that the amount is not sufficient to create a nuisance.

THE FACTORY AND WORKSHOPS ACT, 1904.

The owners of the Royal Mills, Esher, were required by the Council to provide means of escape in case of fire. A 3in. hydraulic main was laid, providing for a jet of water at three different points, a portable fire escape on wheels has also been stationed on the premises; this could be at once moved to any part of the buildings should the necessity arise.

THE COWSHEDS, DAIRIES, AND MILKSHOP REGULATIONS.

The number of registered cowkeepers in the District is	18
Dairies or milkshops (no cows kept)	4

In the course of the year a total of 116 visits have been made for the purpose of securing compliance with the Regulations, the places were found, generally speaking, in a satisfactory condition of cleanliness.

With reference to the periodical limewashing, etc., specified by the Regulations, I have adopted the device of sending to each occupier a printed circular in the early part of each month during which the work is due. On making inspection after a reasonable interval I have in most cases found the requirements complied with, in the few instances where this had not been done a second appeal was successful in producing the desired effect.

SUMMARY OF INSPECTIONS MADE, WORKS OF IMPROVEMENT, ETC.

Total of Inspections under the Public Health Act	1164
Re-inspections arising out of same	445
Inspections under the Factory and Workshops Act	182
Re-inspections in connection with ditto	22
Dairy and Cowshed Inspections	116
W.C. Flushing Tanks repaired	44
New W.C. tanks provided and fixed	13
Repairs in connection with W.C. apartments ...	222
New W.C. pans	11
Privies converted into pail closets	2
New W.C.'s complete with water supply in place of old privies	2
Old valve W.C. replaced with up-to-date appliance complete	1
Blocked drains cleared	11
Premises re-drained	1
Manholes improved and brought to ground level ...	3
Drains Tested	9
New soil pipes provided in place of those defective	3
New sanitary dust bins provided	86
Dirty cottages cleansed throughout	10
Living and other rooms cleansed and limewashed	12
Animals and poultry removed as being improperly kept (three cases)	3
Leaky roof gutters repaired	8

New roof gutters to cottages	6
Accumulations of refuse removed	4
Premises disinfected	25
Smoke observations	19
Letters written on business of the Department ...	122
Communications requesting sanitary amendment	63
Number of written complaints received and attended to	34

I am, Sir,

Your obedient servant,

GEO. C. OVER, Assoc. San. Inst.,

Sanitary Inspector.

TABLE I.—For Whole District.

Year.	Population estimated to Middle of each Year.	Births.		Deaths under One Year of Age.		Deaths at all Ages. Total.		Deaths in Public Institutions.	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	Deaths at all Ages Nett.	
		Number.	Rate.*	Number.	Rate per 1000 Births registered	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1894												
1895												
1896	8,705	208	23·7	15	72·12	92	11·94	...	1	10	101	10·5
1897	8,880	209	23·53	31	148	99	11·5	...	1	5	104	11·1
1898	8,983	226	25·04	20	92·9	104	11·91	...	3	3	104	11·91
1899	9,128	205	22·4	24	117	110	13·29	...	2	11	119	12·04
1900	9,274	205	22·1	20	97·5	84	9·07	3	1	7	94	10·12
1901	9,420	214	22·7	28	131	122	13·0	2	1	10	133	14·2
1902	9,547	214	23·5	21	98·1	100	10·4	2	...	9	104	11·4
1903	9,667	197	20·3	23	116·7	99	10·03	4	2	21	118	12·42
Averages for years 1894–1903	9,175	209	22·9	22·7	105·7	100·7	11·5	1·2	1	9·4	109	11·7
1904	9,787	248	25·3	27	108·8	94	9·5	3	2	15	107	10·9

* Rates calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water), 5,978.

Total population at all ages, 9,489.
Number of Inhabited Houses, 1,996.
Average number of persons per house, 4·75.
} Census, 1901.

Institutions within the District receiving sick and infirm persons from outside the District, Thames Ditton Cottage Hospital.

Institutions outside the District receiving sick and infirm persons from the District, Kingston Union Workhouse, Brookwood Asylum, Surbiton Cottage Hospital.

Is the Union Workhouse within the District? No.

TABLE II.—Esher and The Dittons Urban District.

Year.	Names of Localities.															
	THAMES DITTON.				LONG DITTON.				ESHER.				CLAYGATE.			
	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered	Deaths at all Ages.	Deaths under 1 year.
1896 ...	2,979	80	40	7	2,100	67	22	3	2,430	44	23	4	1,196	17	7	1
1897 ...	3,062	93	51	18	2,126	47	15	6	2,462	42	21	5	1,230	27	12	2
1898 ...	3,094	100	44	6	2,150	49	19	3	2,489	48	31	8	1,250	29	10	3
1899 ...	3,157	89	47	13	2,175	38	21	4	2,518	49	29	5	1,278	29	13	2
1900 ...	3,235	95	36	9	2,206	49	19	4	2,554	39	18	4	1,313	22	14	3
1901 ...	3,311	88	57	14	2,237	41	28	3	2,590	47	29	5	1,346	38	16	4
1902 ...	3,377	97	49	10	2,265	44	20	3	2,623	44	19	5	1,375	29	12	3
1903 ...	3,434	87	45	10	2,289	28	19	7	2,650	52	34	2	1,400	30	16	4
Avgs. of yrs. 1896 to 1903	3,206	91·1	46·1	10·8	2,192	47·0	11·5	4·1	2,538	57	25·2	4·6	1,289	27	12·5	2·6
1904 ...	3,491	110	50	14	2,313	46	21	7	2,671	53	26	4	1,425	39	10	2

TABLE III.—Cases of Infectious Disease Notified during the Year 1904.
In the Esher and The Dittons District.

Notifiable Disease.	Cases Notified in Whole District.							Total Cases Notified in Each Locality.				No. of Cases Removed to Hospital from Each Locality.			
	At all Ages.	At Ages—Years.													
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	Thas. Ditt.	Long Ditt.	Esh'r	Clay-gate.	Thas. Ditt.	Long Ditt	Esh'r	Clay-gate.
Small Pox ...															
Cholera															
Diphtheria ...	6	...	1	4	1	...	...	1	1	1	3	1	1	...	2
Membranous Croup	1	...	..	1	...	...	..	1							
Erysipelas ...	6	...	...	...	1	5	..	1	1	4					
Scarlet Fever ...	11	...	2	7	...	2	...	7	2	1	1	4	1		
Typhus Fever ..															
Enteric Fever ..	3	...	...	...	1	2	...	3	...	...	..	3			
Relapsing Fever ...															
Continued Fever...															
Puerperal Fever ..	3	...	..	...	...	3	...	1	...	1	1				
Plague															
Totals	30	...	3	12	3	12	...	14	4	7	5	8	2		2

Isolation Hospital at Tolworth in Surbiton District.

TABLE IV.

Causes of, and Ages at, Death during Year 1904.

Causes of Death.	Deaths in whole District at subjoined Ages.							Deaths in Localities (at all Ages).				Deaths in Public Institutions
	All ages.	Under 1.	1 & under 5	5 & under 15.	15 & under 25.	25 & under 65.	65 & upwards.	Thames Ditt.	Long Ditton.	Esher.	Claygate.	
Small-pox												
Measles												
Scarlet fever ...												
Whooping-cough...												
Diphtheria & membranous croup ...												
Croup												
Fever:—												
Typhus												
Enteric												
Other continued												
Epidemic influenza	4	...	1	...	...	2	1	...	...	1	3	
Cholera												
Plague												
Diarrhœa	1	1	...	...	...	...	...	...	...	1		
Enteritis	6	5	1	..	...	...	...	5	...	...	1	
Puerperal fever ...												
Erysipelas... ...												
Other septic diseases												
Phthisis	6	1	...	...	1	4	...	3	1	2		
Other tubercular diseases	2	2	...	...	...	...	...	2				
Cancer, malignant disease	5	...	...	...	...	4	1	2	1	2		
Bronchitis... ...	6	...	...	...	...	1	5	3	1	2		
Pneumonia ...	7	2	2	...	1	...	2	2	1	4		
Pleurisy												
Other diseases of respiratory organs...	1	...	...	...	...	...	1	1				
Alcoholism) Cirrhosis of liver)	2	...	...	...	...	2	...	2				
Venereal diseases...												
Premature birth ...	2	2	..	...	...	...	...	1	1			
Diseases & accidents of parturition ...	2	...	...	...	...	2	...	1	...	...	1	
Heart diseases ...	12	...	1	...	1	5	5	7	2	2	1	
Accidents	4	1	...	...	1	1	1	2	...	1	...	1
Suicides												
All other causes ...	49	13	2	1	3	10	20	19	14	11	4	2
All causes ...	109	27	7	1	7	31	36	50	21	26	10	3

1.—INSPECTION.

Including Inspections made by Sanitary Inspector or Inspector of Nuisances.

Premises.	Number of Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries) ..	32		
Workshops (including Workshop Laundries) ...	129	3	
Workplaces	43		
Homeworkers' Premises			
Total	204	3	Nil

2.—DEFECTS FOUND.

Particulars.	Number of Defects. Found.	Remedied.	Referr'd to H M. Insp'ct'r	Number of Prosecutions.
Nuisances under the Public Health Acts:				
Other Nuisances	8	8		

3.—OTHER MATTERS.

Class.	Number.
Underground Bakehouses (S. 101):—	
In Use during 1903	1
Certificates granted in 1903	—
Certificates granted in 1904	1
In use at the end of 1904	1

Homework:—	Number of Lists.	Number of Outw'rk'rs
List of Outworkers (S. 107):—		
Lists received...		
Addresses of Outworkers forwarded to other Authorities ...		
Addresses of Outworkers received from other Authorities...		

Workshops on the Register (S. 131) at the end of 1904:	
Important classes of workshops, such as workshop bakehouses, may be enumerated here: Workshops	22
Dressmakers' Premises	15
Laundries (chiefly Cottage) ...	65
Bakehouses	8
Total number of workshops on Register ..	110

1905.

SUMMARY OF THE REPORTS

OF THE

DISTRICT MEDICAL OFFICERS OF HEALTH

IN THE

ADMINISTRATIVE COUNTY OF ESSEX,

For the Year 1904.

PREPARED FOR THE COUNTY COUNCIL

BY

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PREFACE.

Although the Annual Reports are not, in many cases, prepared and submitted as promptly after the close of the year as could be desired, there is, year by year a marked improvement in their quality. Many of them are now of a very high standard, and with a few exceptions all are good. Unfortunately this higher standard whilst increasing their interest and value, adds to the difficulty of abstracting and the labour of condensation for the purpose of this report. There are a few Medical Officers of Health who appear to share with the general public the erroneous view that they are only a kind of specially qualified Sanitary Inspector whose duties are chiefly to look after privies, cesspools and drains. These no doubt are important, but the general sanitary condition of the country (so far as drainage and filth nuisances is concerned) has improved so greatly during the last half century, that, however much attention is given in future to these matters, we cannot hope to effect any further marked decrease in the death-rate thereby. There are other preventable causes of mortality which now require special study. For example the causes of Tuberculous diseases which carry off annually more victims than all the so called infectious diseases put together, and the causes of the excessive mortality amongst the very young. In some districts about half the total deaths are of children under five years of age, and one sixth of all the children born die before attaining the age of one year. Measles, Whooping Cough and Diarrhœa cause many times more deaths than Scarlet Fever, Diphtheria and Typhoid Fever, yet enormous sums are spent in preventing the latter, and every report directs attention to the cases which have occurred, whilst practically nothing is done to prevent the former, and some Medical Officers of Health do not appear to consider them of sufficient importance even to mention. In certain districts these diseases are receiving the attention they deserve; the Medical Officers of Health discuss the influence of the various factors which tend to cause and spread these diseases, the

nature of the milk supply, school attendance, ignorance of parents and parental neglect. The Sanitary Authorities advised by such Officers are giving increased attention to the necessity for less polluted milk, and its proper storage in the shops and in the homes. They are also endeavouring to promote such relations between the education and public health departments as will tend to limit the spread of infectious diseases by school attendance. Moreover by the appointment of women inspectors they are assisting to discover the causes of the excessive infantile mortality, and, indirectly, if not directly, are educating mothers with regard to the rearing of infants and the care of young children. In other districts Phthisical patients are receiving attention, and by the giving of advice with reference to the danger arising from spitting, and the necessity for the proper disposal of sputum and by the disinfection of infected houses are endeavouring to decrease the mortality from Phthisis.

Medical Officers of Health must advance with the times. No doubt in former years filth nuisances were so common and so prolific a cause of disease and death that they justly received the greatest share of the attention of sanitarians, so great a share indeed that sanitation has almost come to be considered as merely a matter relating to house refuse and sewage. This is very unfortunate and little further progress is possible until this erroneous opinion is corrected. How different are the views of the Local Government Board is well shown by their regulations defining the duties of a Medical Officer of Health. The two first only need be quoted :—

(1) He must inform himself as far as practicable respecting *all* influences affecting or threatening to affect injuriously the public health within the district.

(2) He must enquire into and ascertain by such means as are at his disposal the causes, origin and distribution of diseases within his district, and ascertain to what extent the same have depended on conditions capable of removal or mitigation.

There is no limitation expressed or implied to any particular group of infectious diseases, or to infectious diseases as a whole, nor to any particular group of causes such as filth accumulations. On the contrary *all* diseases are included and *all* causes affecting the public health.

When once Medical Officers of Health have grasped the full significance of these duties and Sanitary Authorities become alive to their importance a revolution will have been effected, and a new sanitary era will dawn in which we may reasonably hope to see our infantile mortality reduced to such an extent as to be no longer a disgrace to us as a civilized nation. A corresponding decrease in the general mortality will then result, and a larger proportion of the community will reach and enjoy a patriarchal old age.

In the present report more attention has been given to the study of the death-rate and cause of death than to work of drainage, water supply, etc., partly because these subjects have been fully treated in previous reports, but more especially for reasons which are indicated in the above remarks.

A brief reference to the opinion expressed by the Right Honourable A. Balfour at the meeting of the British Association in 1904 may not be out of place here. He said "It seems that as the State contrives education so as to allow the rising from a lower to an upper class, so much does it do something to diminish the actual quality of the breed . . . There is, or seems to be, no escape from the melancholy conclusion that everything done towards opening up careers to those of the lower class, does something towards the deterioration of that race." He bases the above conclusions upon two assumptions. First, that the better educated classes have fewer children than the less educated, and therefore the lower classes tend to increase far more rapidly than the educated classes; secondly, that there is a greater tendency to 'deterioration' in mental and physical qualities amongst the working classes than amongst the educated classes.

If Mr. Balfour's conclusions are correct, then the enormous sums of money we are spending on education and sanitation are being wasted, or are actually being employed for purposes which deteriorate the race. Fortunately, however, both his assumptions are practically baseless. Crude statistics may lead one to infer that the birth-rate is much higher in working class communities than in those of a higher class, but a reference to the Chapter on the Birth-rate in the present report will show that when these statistics are carefully studied, there is no marked difference in the true birth-rates of the two classes, and a reference to the Report of the Commission on Physical Deterioration will show that this alleged deterioration is a figment of certain disordered imaginations and has no real basis on fact. Attention to sanitary matters does not increase the number of weaklings and decrease the proportion of the healthy and the strong, it prevents the attacks of disease, makes the weak strong, and the strong still more vigorous. No doubt in sanitary matters there is much mis-directed effort, we are expending an enormous amount of time, energy and capital to prevent a few diseases of comparatively little importance and doing very little indeed to prevent other diseases of a far more fatal character, and especially affecting children, and adults at that period when they should be of greatest service to the community. But if we have got into a rut, that is no reason why we should not get out of it, and acknowledge that Public Health means something more than attention to drains, sewers and water supplies. A broader view of the subject is already being taken and we may reasonably hope that in a few years these views will be generally held, and the community benefit thereby.

In making these remarks I am casting no reflection upon the Medical Officers in this County, because as a whole I doubt whether any county is better served. I am merely pointing out that all of us may with advantage devote more time to the study of a larger and more varied series of causes of disease, and of methods for their prevention, than has been general

heretofore. In all matters relating to the health of the County, and in preparing this report, the Medical Officers of Health have rendered me all the assistance in their power and I desire here to thank them for this assistance and for their courtesy.

JOHN C. THRESH.

Chelmsford, July, 1905.

NOTE.

Unfortunately the Abstracts of the Reports was struck off by the printer before the local Medical Officers had had time to submit their corrections to me. Very few errors or mis-statements, however, were detected.

In some instances the area given differs slightly from that furnished by the Medical Officer of Health, but as those given in the text are all taken from the official census returns I have not thought it desirable to alter them.

The various death-rates, etc., given at the head of each abstract have not been carried to the second place of decimals, as some Medical Officers have wished in their corrections. This is a very unnecessary refinement, not justified by the accuracy of our statistics. As they stand they are as correct as the statistics justify.

In one or two instances the death-rates given are those calculated by me from the returns and differ from those given by the Medical Officer of Health. Where this has occurred a note has been appended, giving the reasons for the correction.

The only errors requiring correction are the following :—

The Clacton and Walton reports are said to be type-written. The Medical Officer of Health kindly furnished me with advanced type-written copies, but *printed* copies were afterwards supplied. In the East Ham abstract it is stated that the Council has no power to enforce the pavement and drainage of back passages. The Medical Officer of Health kindly points out that this power has been obtained in the East Ham Improvement Act of 1903.

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SECTION I.

Population of the County, Birth-Rate, Death-Rate, Etc.

According to the estimates of the Medical Officers of Health, the population at the middle of the year was

In the 32 Urban Districts	.	667,404
In the 18 Rural Districts	...	245,574
		912,978

On the assumption that the population is increasing at the same rate as during the last intercensal period, the number of persons living in the Administrative County in the middle of the year 1904 would be 913,480. The approximation of this result to that arrived at by totaling the different local estimates is remarkably close, the difference amounting only to 502. The corresponding difference was a little greater last year, and it would seem therefore that the rate of increase during 1891—1901, amounting to 41·2 per cent. in the ten years, is still being maintained. Should this continue throughout the decade the population in 1911 will amount to about 1,150,000, or almost exactly twice that of 1891.

Much care and trouble are taken in preparing some of the local estimates of population, but others do not receive the same attention, and it is possible therefore that the resulting total is beginning to diverge appreciably from the truth. Shortly before the last census the sum of the local estimates was about 5 per cent. in excess of the true figure. There is no circumstance at present, however, as far as I am aware, to point to any considerable error; and in view of the close correspondence of the results of the two methods of estimation it will be assumed that errors in the local estimates have so far neutralised each other, and the total of these estimates will, therefore, be used as a basis for the following statistics.

TABLE I.

BIRTH-RATES PER 1,000 POPULATION.

	1904.	1903.	Mean 1890-1902.
Urban Districts...	28·8	30·0	30·6
Rural Districts	24·2	25·1	25·6
Administrative County ...	27·5	28·6	28·6
England and Wales	27·9	28·4	29·7

During the year 19,193 births were registered in the Urban Districts, and 5,955 in the Rural Districts. The rates per thousand population resulting from these figures are stated in the above table. These rates (for 1904) are in all cases considerably below the corresponding rates both for 1903 and for the 13 years 1890—1902, but they are higher in all cases than the rates recorded for 1902, which were the lowest on record for Essex. For England and Wales, on the other hand the birth-rate for 1904 is considerably below that for 1903, which was the lowest previously recorded.

The birth-rate of the country at large has fallen very steadily since 1876, only four years during the whole of that period giving a rate above that of the preceding year. The rates for Essex since 1890 are all, except two, below those for England and Wales in the corresponding year. Their fall was quite as rapid until 1898, since when it has been arrested, and no further fall can be said, on the whole, to have occurred. Thus the position of Essex, as regards birth-rate, has shown a tendency to relative improvement during the last few years owing to the steady decline of the rate for the country as a whole. This decline, which has been more marked during 1904 than in any year since 1894, is a most noteworthy phenomenon of modern life, and continues to arouse much well-deserved interest. The Medical Officer of Health for Southend in his

report this year says "It is rather usual to lament a decreasing birth-rate, but in view of the enormous yearly addition to the population of the world, which hitherto has been increasing almost in geometrical ratio, it becomes a question whether a decreasing birth-rate is not, after all, a matter of congratulation for posterity."

Others, from a comparative survey of national statistics, come to the conclusion that a low birth-rate is usually associated with a low rate of infantile mortality, and is therefore an indication of advanced civilisation. In this country, however, the fall in the birth-rate has not been associated with any fall in the rate of infantile mortality, and arguments such as those quoted above take no account of one very vital aspect of the question. In the struggle for national ascendancy the nation which neglects the duty of reproducing itself can scarcely hope to maintain its position.

The total deaths in the County (including 257 in the County Lunatic Asylum) numbered 12,101, of which 8,674 occurred in the Urban and 3,427 in the Rural Districts. The excess of births over deaths is, therefore 13,047, or 1,732 less than in 1903, the number of deaths in 1904 having considerably in-

TABLE II.

DEATH-RATES PER 1,000 POPULATION.

	1904.		1903.		Mean 1890-1902.	
	Crude.	Corrected	Crude.	Corrected	Crude.	Corrected
Urban Districts	13·00	13·47	11·5	11·9	14·7	15·2
Rural Districts	13·95	11·99	13·0	11·2	15·1	13·0
Administrative County	13·25	12·94	11·9	11·6	14·8	14·5
England and Wales ...	16·2	16·2	15·4	15·4	18·1	18·1

creased, while the number of births has somewhat diminished. Thus the remarkable ratio of birth-rate to death-rate noted in last year's report, the former $2\frac{1}{2}$ times as great as the latter, has not been maintained. The ratio however, which is now 2·1 instead of 2.5, is still a high one, as it compares with 1·7 for England and Wales during the year.

The natural increase, or excess of birth-rate over crude death-rate is 14·25, as against 16·7 in 1903. Even the former figure is, however, a high one, exceeding by 2.55 that for England and Wales in 1904.

It is satisfactory to note that the County death-rate continues low, comparing very favourably, especially after correction, with that for England and Wales. Three remarkably low death-rates have now been recorded in succession, 12·6 (1902) 11·9 (1903) and 13·25 (1904). As the meteorological conditions in 1904 were less favourable to a low death-rate than those of the two preceding years—the hot summer led to a high diarrhœa mortality—the slight increase in 1904 is only what was to be expected. Few counties indeed have so low a death-rate as Essex. In 1903 only six registration counties had a lower rate than the registration county of Essex, and this, as it includes the large urban population of West Ham with a death-rate in 1903 of 15·3 yields a death-rate considerably above that of the Administrative County. The above figures are quoted from the Registrar General's last Annual Report (1903). As compared with his figures, the death-rate calculable from the population estimates and deaths recorded in the local reports are consistantly somewhat low. Thus it may be shown that for 1903 his figure for the Registration County (13·2) corresponds to 12·5 instead of 11·9 for the Administrative County. Of the ·6 difference between these figures about ·2 is accounted for by the fact that the Registrar General's estimate of population is appreciably lower than that adopted in the County Report, and the remaining ·4 by the fact that more deaths appear in his returns than are recorded in the various local reports. Possibly this difference is in fact inevit-

able, as his facilities for allocating to their proper districts deaths of non-residents, exceed those of the local Medical Officers of Health in the case of deaths of residents occurring outside their districts; but the existence of such a difference points to the need for the exercise of the utmost care in obtaining the fullest possible record of deaths of residents occurring in Public Institutions outside the district. The difference in 1902 was ·7; that for 1904 cannot be estimated until the appearance of the Registrar General's report for that year.

As against this probable under estimation may be placed the fact that the corrected death-rate of the Administrative County is ·3 lower than its "crude" death.rate (see Table II.), and making all allowances which appear to he required, it may be stated with some confidence that the County death-rate in 1904 is from 2·5 to 3·0 per 1000 lower than that of England and Wales—a very satisfactory state of affairs.

TABLE III.

RECORDED AND CORRECTED DEATH-RATES PER 1,000 PERSONS LIVING IN THE ADMINISTRATIVE COUNTY AND IN CERTAIN SELECTED DISTRICTS.

	Standard Death-rate.	Correction Factor.	Crude Death-rate.	Corrected Death-rate.	Comparative Mortality Figure.
Administrative County ...	18·63	·9769	13·25	12·9	1000
Romford Urban	19·27	·9445	10·1	9·5	734
Chelmsford Urban	19·53	·9333	11·1	10·4	803
Rural Districts, excluding Orsett and Romford ..	21·42	·8497	13·8	11·8	912
Rural Districts	21·17	·8597	13·95	12·0	927
Smaller Urban Districts ...	18·47	·9854	12·3	12·2	940
Ilford	16·87	1·0790	10·9	12·6	974
Walthamstow	17·20	1·0587	12·0	12·7	981
Urban Districts	17·56	1·0364	13·0	13·5	1041
Grays Thurrock	15·61	1·1662	11·7	13·6	1051
Orsett	18·51	·9831	14·0	13·8	1066
Leyton	17·69	1·0294	13·5	13·9	1074
Romford Rural	18·46	·9862	14·4	14·2	1097
East Ham	17·06	1·0674	13·8	14·7	1136
Southend-on-Sea	17·07	1·0662	14·2	15·1	1167
Barking	17·17	1·0600	14·5	15·4	1190
Colchester	17·16	1·0606	15·9	16·9	1306

As in 1903 the crude death-rate is higher in the Rural than in the Urban Districts, but the corrected Urban rate is considerably above the corrected Rural, proving that the conditions of life are really healthier in the Rural Districts, and that the apparently lower death-rate of the urban population is entirely due to its more favourable age constitution.

Table III. corresponds with Table IV. in last year's Report, in which the method of its construction was described. The different districts are arranged in order of merit, or of Comparative Mortality Figure, the mortality in each case being compared with that of the Administrative County reckoned as 1,000. If the mortality of England and Wales had been taken as the standard only one district, Colchester, the lowest on the list, would have had a figure of over 1,000. It may be noted that the same two districts as last year, Barking and Colchester, occupied the lowest positions in the table, but whereas in 1903 Barking was below Colchester, now the latter is lowest of all.

As in 1903 the Rural Districts, especially when two of a semi-urban character are excluded, occupy a high position in the list, their record being exceeded only by that of two comparatively small urban districts. The order throughout is, indeed, on the whole very much the same as in 1903. Ilford as was to be expected, has not maintained the very high position achieved in 1903, but its record is still a good one. As in 1903, the smaller Urban Districts occupy fifth position, next to the Rural Districts, a fact which seems to indicate that so far as conditions affecting mortality are concerned the smaller towns resemble the Rural rather than the larger Urban Districts.

The number of deaths recorded of infants under one year of age was 3,302, of which 2,651 occurred in the Urban, and 651 in the Rural Districts. These figures yield rates slightly above the average for the last 14 years, and very much above the rates for 1903, which were, however, the lowest recorded

during that period. The excess over 1903 is entirely due to the abnormally heavy diarrhœa death-rate of 1904, contrasting as it does with an exceptionally low death-rate from the same cause in 1903.

TABLE IV.

DEATHS OF INFANTS PER 1,000 BIRTHS.

	1904.	1903.	Mean 1890-1902.
Urban Districts	143	106	138
Rural Districts	109	87	105
Administrative County ..	135	101	127
England and Wales ...	146	132	152

Deducting diarrhœa deaths, the remaining infantile deaths numbered 2,268 in 1903 and 2,262 in 1904. In fact, both births and non-diarrhœal deaths were practically the same in both years, so that the increased infantile mortality is entirely due to the increase of diarrhœa deaths from 291 in 1903 to 1,040 in 1904.

The increase in infantile mortality is, as might be expected, greater in the towns, where diarrhœa is more prevalent, than in the country, 35 per cent. as against 25, the urban rate being also, as usual considerably in excess of the rural. The County rate has increased considerably more, as compared with last year, than that of England and Wales, but is still well below the latter. The rate for England and Wales is below, whereas that for the County is above, the average for recent years. The above facts taken in conjunction with the steadily falling birth-rate, point strongly to the necessity for vigorous measures against this waste of infant life, which shows, on the whole, no tendency to decrease. Probably the part of it due to diarrhœa, amounting in 1904 almost to one third of the whole, is the most preventable, and it is against this scourge especially that effort should in the first place be directed.

In this connection it may be noted that Walthamstow and Ilford have recently followed the example of many populous centres outside the County, in appointing a lady Health Visitor. Amongst the most important of such official's duties is that of visiting houses in which births occur, and instructing the mothers, especially when young and inexperienced, in the care of their babies. The ignorance prevalent on this all-important subject is amazing, and would often be comic where the tragic element not predominant. The visits and instruction of a nurse are accepted in many cases where the efforts of a male inspector would be futile, and there is no doubt that much good can be done in this way. General sanitary work will at the same time receive its due share of attention from a properly trained Health Visitor.

It is probable that more deaths from diarrhœa are due to the conditions of storage and methods of preparation of milk and other foods in the houses of the poor than to essential faults in the food as purchased, though in the case of fresh cows' milk the latter are also of the utmost importance. Instruction of the mothers must be the most effective means of dealing with the first of these dangers, and there can be no doubt as to its usefulness, as carried out by an instructed and tactful woman, while there is on the other hand much difference of opinion as to the best means of dealing with the second evil, whether by municipal depots for the supply of sterilised or of pasteurised milk, by legislation, by voluntary associations encouraging the sale of clean fresh milk, &c.

The number of deaths from the principal zymotic diseases is nearly double last year's, but the increase is almost exclusively due to Epidemic Diarrhœa, other diseases being much below the average. Excluding Diarrhœa the figures are 785 in 1903, and 819 in an increased population in 1904.

TABLE V.

DEATHS FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES.

	Urban Districts.	Rural Distrtcts.	Total.
Small-pox	2	0	2
Measles	204	61	265
Scarlet Fever	51	12	63
Whooping Cough ...	177	71	248
Diphtheria & Mem. Croup	136	27	163
Typhoid & Allied Fevers	62	16	78
Epidemic Diarrhœa ...	918	122	1040
Totals	1550	309	1859

TABLE VI.

DEATH-RATES PER 1,000 POPULATION FROM EACH OF THE SEVEN PRINCIPAL ZYMOTIC DISEASES, 1904.

	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Fevers.	Diarrhœa.	Totals
Urban Districts ...	·003	·306	·076	·265	·203	·093	1·375	2·32
Rural Districts ...	0	·248	·019	·289	·110	·065	·497	1·26
Administrative County	·002	·290	·069	·272	·179	·085	1·139	2·04
England and Wales ...	·01	·36	·11	·34	·17	·09	·86	1·94
Administrative County, Mean for 14 years, 1890-1903.	·020	·111	·350	·283	·276	·319	·637	1·91

Birth-Rates and Death-Rates.

TABLE VII.

	Urban Districts.	Birth-rate.	Infantile Mortality	Death-rates from			Medical Officers of Health.
				All causes.	Seven principal Zymotic Diseases	Phthisis.	
1	Barking	33·8	144·0	14·5	3·66	·98	C. F. Fenton, L.R.C.P., M.R.C.S.
2	Braintree	25·0	82·7	15·4	1·50*	·94*	Percy R. Stevens, L.R.C.P., M.R.C.S.
3	Brentwood	16·7	78·5	11·2	·49	·98	S. Frazer, L.R.C.P., L.R.C.S.
4	Brightlingsea	22·1	76·9	12·8	0	·43	E. P. Dickin, M.B., C.M.
5	Buckhurst Hill	23·0	69·0	8·9	·8*	·6*	W. H. Gimblett, M.D.
6	Burnham	25·2	73·2	13·2	1·54	1·23	C. F. Downman, M.R.C.S., L.R.C.P.
7	Chelmsford	25·6	65·5	11·1	·38	·99	H. W. Newton, M.R.C.S., D.P.H.
8	Chingford	20·5	135·9	9·3	1·59	·60	Geo. F. Fulcher, M.B., C.M.
9	Clacton	24·9	114·6	13·9	1·56*	1·56*	J. W. Cook, M.D.
10	Colchester	26·0	176·2	15·9	3·17	1·03*	Wm G. Savage, M.D., D.P.H.
11	East Ham	31·8	154·7	13·8	2·91	1·19	A. W. Beaumont, M.D.
12	Epping	23·9	104·2	11·7	1·25*	·50*	Trevor Fowler, L.R.C.P. & S.I., D.P.H.
13	Frinton	22·2	105·3	8·2	0	0	H. W. Godfrey, M.D., M.R.C.S.
14	Grays	29·0	135·4	11·7	1·18	1·11	John A. Ward, M.D.
15	Halstead	21·0	85·9	12·3	·82*	·82*	C. Gordon Roberts, M.A., M.B., B.C.
16	Harwich	27·8	126·7	14·5	·86*	1·14*	H. Gurney, M.R.C.S., L.R.C.P.
17	Ilford	28·6	127·9	10·9	1·79*	·61*	C. F. Stovin, M.A., D.P.H.
18	Leigh-on-Sea	25·1	150·0	14·7	·84	1·05	W. D. Watson, M.R.C.S., L.R.C.P.
19	Leyton	30·75	141·7	13·5	2·74	1·2	A. F. Peskett, M.R.C.S.
20	Loughton	20·6	85·7	9·0	·39	·59	A. Butler Harris, M.A., M.B., B.Ch. Oxon.
21	Maldon	25·6	83·3	14·1	·89	·89	H. Reynolds Brown, M.D.
22	Romford	28·4	117·2	10·1	2·04*	·95*	A. Wright, M.D.
23	Saffron Walden... ..	19·4	115·0	12·9	·17	·51	W. Armistead, M.B.
24	Shoeburyness	31·9	137·7	10·4	4·63	·69	E. W. Walter, M.R.C.S., L.R.C.P.
25	Southend-on-Sea ...	24·0	178·7	14·2	2·29	1·19	J. T. C. Nash, M.D., D.P.H.
26	Waltham Holy Cross ...	24·4	104	13·1	·74*	1·63*	J. Damer-Priest, M.R.C.S., D.P.H.
27	Walthamstow	32·8	135·9	12·0	2·89	·86	J. J. Clarke, L.R.C.P.I., D.P.H.
28	Walton-on-the-Naze ...	20·6	46·5	9·6	·0*	·0*	J. W. Cook, M.D.
29	Wanstead	21·3	93·6	9·3	1·26*	·63*	F. Argles, M.R.C.P.Ed., M.R.C.S.
30	Witham	24·1	58·8	14·8	·57	1·14	K. C. Gimson, M.B.
31	Wivenhoe	19·6	102·0	10·8	·0*	·40	G. Pender-Smith, L.S.A.
32	Woodford	28·4	129·5	11·6	1·63	·41	W. G. Groves, M.R.C.S.

*Death rates marked thus are based upon uncorrected or imperfectly corrected death returns.

Birth-Rates and Death-Rates.

TABLE VIII.

	Rural Districts.	Birth-rate.	Infantile Mortality	Death-rates from			Medical Officers of Health.
				All causes.	Seven principal Zymotic Diseases.	Phthisis.	
1	Belchamp	17·5	152·9	15·9	1·65	·41	J. Sinclair Holden, M.D.
2	Billericay	23·2	99·2	11·0	·66	·26	Fred Carter, M.D.
3	Braintree	20·9	87·1	13·6	·50*	1·27*	L. P. Black, M.A., M.B., B.C., D.P.H.
4	Bumpstead	23·4	140·4	19·3	1·23	·82	Wm. Armistead, M.B., F.C.S.
5	Chelmsford	22·3	86·1	13·1	·67	·71	John C. Thresh, M.D., D.Sc., D.P.H.
6	Dunmow	22·0	97·1	15·7	·91	·39	Edmund E. Goodbody, M.D.
7	Epping	24·6	123·8	14·2	1·17	·55	Trevor Fowler, L.R.C.P. & S.I., D.P.H.
8	Halstead No. 1. ...	21·6	70·7	10·2	·22	·65	J. Henry Ashworth, M.D.
9	Halstead No. 2. ...	18·4	104·8	16·3	·18	0	J. B. Bromley, M.R.C.S.
10	Lexden and Winstree ...	23·3	103·1	13·0	·94*	1·41*	J. W. Cook, M.D.
11	Maldon	27·8	63·7	13·8	·61	·82	John C. Thresh, M.D., D.Sc., D.P.H.
12	Ongar	20·2	59·1	11·7	1·00	1·00	J. C. Quennell, M.R.C.S
13	Orsett	33·9	133·2	14·0	2·60	·50	Rea Corbet, M.R.C.S.
14	Rochford	28·1	111·1	13·9	1·59	·89	F. Dorrell Grayson, M.R.C.S.
15	Romford	27·0	174·2	14·4	3·28*	·59*	Alfred Wright, M.D.
16	Saffron Walden ...	22·2	136·0	17·5	·98	·98	Wm. Armistead, M.B., F.C.S.
17	Stansted	24·7	111·8	16·1	2·47	·87	R. A. Dunn, M.D., D.Hy., D.P.H.
18	Tendring	23·5	96·4	12·3	·94*	1·04*	J. W. Cook, M.D.

*Rates marked thus are based upon uncorrected or imperfectly corrected death returns.

In Tables VII. and VIII. are recorded the birth-rates, infantile mortality, and death-rates from all causes, from the principal zymotic diseases, and from Phthisis, in each of the Sanitary Districts in the County.

Birth-rates. Besides the ordinary, or crude, birth-rates recorded in Tables I., VII., and VIII., certain "corrected" birth-rates are given in Table IX. The object of calculating these is to eliminate certain influences which otherwise render a fair comparison between the birth-rates of different districts

TABLE IX.

CORRECTED BIRTH-RATES.

	Wives aged 15-45 at Census 1901.	Births calculated on Swedish basis.	Standard Birth-rate.	Correction Factor.	Crude Legitimate Birth-rate.	Corrected Legitimate Birth rate.	Corrected Total Birth-rate.
England and Wales	3,803,942	1,135,686	34·91	1	26·8	26·8	27·9
Essex County ...	98,140	29,053	35·58	·9812	26·7	26·2	27·1
Urban Districts ...	73,694	21,981	38·17	9·146	28·0	25·6	26·5
Rural Districts ...	24,446	7,073	29·37	1·1886	23·2	27·6	28·7
East Ham ...	14,126	4,261	44·38	·7866	31·3	24·6	25·3
Walthamstow ...	13,260	3,989	41·93	·8326	32·4	27·0	27·5
Leyton	12,727	3,767	38·09	·9165	29·3	26·9	28·5

impossible. For instance, the population of the Essex Rural Districts contains a smaller proportion of young and middle-aged women than that of the Urban Districts; fewer of these are married, and the average age of those who are married is greater, and their capacity for bearing children therefore less. (Fertility in women steadily declines from about 20 onwards.) For each of these reasons the rural population is adversely handicapped as regards birth-rates in comparison with the urban. The "corrected" birth-rates in the table purport to neutralise these inequalities of circumstance by stating in each case what the birth-rate would be if the populations concerned

were all similar in the three respects above referred to. The population of England and Wales, 1901, is taken as the standard. If the Essex rural population had been as well provided with young married women as that of England and Wales the rural birth-rate would last year have been 28·7 instead of 24·2 ; and if the urban population had not been better provided than that of England and Wales its birth-rate would have been only 26·5 instead of 28·8. It follows that the Rural Districts, though their (crude) birth-rate is considerably lower, have exhibited a greater fertility than the Urban, and this is true of past years as well. Their fertility, of which the corrected and not the crude birth-rate is the measure, is indeed constantly above that of England and Wales, and the fertility of the Urban Districts below it.

Comparing Essex with England and Wales the Table shows that the County birth-rate falls behind really more than it appears to do. The corrected birth-rate has never, since 1890, exceeded that of England and Wales, and only once, in 1891, has it equalled. It is interesting to note the reason why the County rate, like that of the Urban Districts might have been expected to be higher than that of the country as a whole. It is not that there are proportionally more women of an age to bear children—there are fewer—but a very high percentage, 51·5, of these women, are married, as against 46·8 in the whole country. Only three counties, Durham, Glamorgan and Monmouth, have a larger proportion of their potential mothers married than Essex.

The method employed in obtaining the corrected birth-rate has been evolved from that described in last year's Report, means having been found to introduce more complete correction. The results for 1903 do not differ greatly from those given in that report. The method now employed has been described in the Journal of Hygiene, April, 1905. The records as to legitimacy are not as yet available for 1904, but we shall not greatly err in assuming the same proportions of legitimate to total births as in 1903. The recorded illegitimate birth-rate is

corrected in accordance with the proportion of single women and widows aged 15-45 in the district, and the result added to the corrected legitimate in order to obtain the total corrected birth-rate.

As the result of correction the deficiency of the County birth-rate, compared with that of England and Wales, is doubled (·8 in Table VII. as against ·4 in Table I.), the Urban rate, instead of being higher, becomes lower than that of England and Wales, and the Rural rate, instead of being much lower, becomes higher. The rates for the East Ham, Walthamstow and Leyton (the only districts for which the information necessary for obtaining a correction factor can be got) are much diminished, and that for Leyton, which uncorrected is the lowest of the three (see Table VIII.) when corrected becomes the highest. The chief reason why the correction factor for Leyton is so much higher than those for East Ham and Walthamstow is that in Leyton only 51·3 per cent. of women aged 15-45 are married, as against 61·9 in East Ham, and 59·0 in Walthamstow (and 46·8 in England and Wales).

The highest crude birth-rate of the year is that of Barking (33·8) but probably if a factor for correction could be obtained here, it would resemble somewhat that for East Ham, and diminish this apparently high rate very materially. The paucity of rates of 30 or over is very striking. There are only five in the Urban and none in the Rural Districts. There are the same number of rates below 20.

Infantile Mortality. The highest rates amongst the Urban Districts are those of Southend and Barking, and amongst the Rural, Belchamp and Bumpstead. The figure for Southend, 179, is exceptionally high, and is discussed at considerable length in Dr. Nash's report. The excess is chiefly due to an exceptionally severe outbreak of epidemic diarrhœa in August, attributed by him to infection carried by flies.

Death-rates from all causes. In the following districts the (crude) death-rates are excessive :

Urban.	Rural.
Colchester 15·9	Bumpstead 19·3
Braintree 15·4	Saffron Walden 17·5
	Halstead II. 16·3
	Stanstead 16·1

the largest number of high death-rates in the Rural Districts being dependent on the greater age average of the population. The Ilford rate, as usual is very low.

The highest death-rates from the seven principal zymotic diseases occurred in Shoeburyness, 4·6, Barking, 3·7, Colchester, 3·2, and Romford Rural, 3·3. Several small Urban Districts record no death from zymotic disease.

Cancer.

In last year's report the effect of correction for age and sex distribution of the population upon the urban and the rural cancer death-rates respectively was described, and it was shown that while this correction considerably increased the urban and decreased the rural rates, it left that for the county as a whole practically unaffected. This year the same corrections have been made, and the results embodied in Tables X. & XI.; and in addition factors for correction and crude and corrected death-rates have been worked out for six of the individual Urban Districts, in order to study with greater accuracy the distribution of the disease throughout the County.

The increase in the cancer death-rate appears to continue, the last recorded rate for England and Wales ·872 per 1,000 in 1903 being once more the highest on record. The rate for the Administrative County has also increased somewhat, and is the highest recorded since cancer deaths were first separately stated in the tables appended to the Annual Reports (in 1900). There has been a considerable fall in the rural rate and a considerable rise in the urban, the balance being on the unfavourable side. For the first time indeed, as indicated by the corrected death-rates, the disease has taken a heavier toll

of the urban than of the rural districts in proportion to the number of old people contained.

It is satisfactory to note that the death-rate for the County remains very considerably below that of England and Wales. The continuous apparent increase going on in Essex is evidently a part of the similar tendency throughout the country generally, which is engaging so much attention at present.

TABLE X.

Cancer Death-rate per 1,000 Population.

	Correction Factor.	1904.		1903.		1900-02.	
		Crude.	Corrected.	Crude.	Corrected.	Crude.	Corrected.
Urban Districts ...	1·1609	·649	·753	·575	·668	·558	·648
Rural Districts	·7701	·867	·668	1·009	·777	·987	·760
Administrative County ...	1·0132	·708	·717	·695	·704	·680	·689
England and Wales ...	1·0	...	...	·872	·872	·838	·838

Very few of the local reports contain any reference to the subject of Cancer beyond the information as to number of deaths furnished in the tables.

Barking. The death-rate, ·37, is the lowest recorded. This figure would doubtless have to be considerably increased on correction. (See East Ham in Table XI.)

East Ham has had precisely the opposite experience, the death-rate, ·61, being the highest recorded since the records began in 1900.

Southend. The Cancer death-rate here has been very steady for the last five years, and the crude rate is little affected by the correction, ·72 this year merely increasing to ·75. The Medical Officer of Health gives the results of inquiries made with regard to 22 of the 30 deaths. Only four of the 22 had resided in the borough more than five years, and in three of

these cases a family history of Cancer was obtained. In five cases inquired into a primary Cancer had been operated on 9 years, 2 years, 1 year, 1½ years, 15 years, and 1½ years previously. In 11 cases the disease was connected with the digestive, and in 5 cases with the reproductive organs. Evidently, had it not been for the large proportion of imported cases, the Cancer death-rate of Southend in 1904 would have been exceptionally low.

Walthamstow. The death-rate here is the highest from 1900 on. In Dr. Clarke's opinion "an increase of 18 deaths over the previous year indicates not so much a greater incidence among the population as a more correct appreciation of the condition with advancing knowledge." To this advance of knowledge the increase in the recorded Cancer death-rates is no doubt, in part at all events, attributable, but as between two consecutive years it cannot be supposed to tell very heavily, and the fluctuation (from a death-rate of ·41 in 1903 to ·56 in 1904) is scarcely so great as to require any special explanation.

Dunmow. Here it is noted that the deaths have decreased, and are distributed fairly evenly over the district.

TABLE XI.

Cancer Death-rates for Certain Urban Districts.

	Correction Factor.	1904.		1903.		1900-02.	
		Crude.	Corrected.	Crude.	Corrected	Crude	Corrected
East Ham	1·5018	·61	·92	·54	·81	·47	·70
Walthamstow ...	1·4305	·56	·80	·41	·59	·47	·67
Leyton	1·1299	·59	·67	·54	·61	·63	·71
Colchester	1·0550	·96	1·01	·51	·54	·63	·67
Southend	1·0343	·72	·75	·72	·75	·79	·81
Braintree (U.) ...	·7782	·56	·46	·56	·46	·81	·63

The above table is of interest as shewing the necessity, in certain cases at all events, of correcting Cancer death-rates. Such districts as East Ham and Walthamstow contain proportionately very few old people and to this cause alone the low death-rates returned by East Ham are attributable, for its corrected death-rate is persistently above that of the County. In view of the fact that it may be necessary to multiply the death-rate of a district by 1½ to obtain the true incidence of the disease it is obvious that it is of the highest importance, in comparing prevalence in different localities, to calculate correction factors in all cases where there is a possibility that the age distribution of the population differs markedly from the normal. Otherwise most erroneous deductions may be drawn, and we might indeed be discussing, for instance, the reason for the low death-rate of East Ham. Leyton, it will be observed, a district of similar type to East Ham and Walthamstow, but not of quite such recent development, has a factor considerably above unity, but very much lower than theirs—people have had time to grow old in Leyton. Colchester and Southend are districts of a different type, and their correction factors reflect the fact. Both have their fair quota of old people, Southend, in spite of its very rapid growth, having been able, as a health resort, to import them. At the opposite end of the scale comes Braintree. This was selected as a type of the small, stationary country town. Its population is evidently rural rather than urban in respect to age distribution, for the preponderance of old persons causes it to have a correction factor (·7782) almost as low as that for the Rural Districts (·7701).

Phthisis.

The number of deaths due to Phthisis, including deaths in the Essex County Asylum, was 868, and to other tubercular diseases 389, being 7·2 and 3·2 per cent. of the total deaths of the year respectively. The percentage of deaths due to tubercle in one form or another was thus 10·4 of the total deaths, as against 2·5 per cent. due to Small-pox, Scarlet Fever, Diphtheria and Typhoid Fever combined. This is about the usual percentage of tubercular deaths. Thus the Colchester

report records a percentage of 10·8 equal to four times the mortality of the above-mentioned other four diseases, and the Southend report 11·99 as against 2·18 due to the same four diseases and Erysipelas and Measles as well. The Walthamstow report also records that $\frac{1}{9}$ (more exactly 10·8 per cent.) of all the deaths were due to tubercle.

Tubercular Diseases.

TABLE XII.

Death-rate per 1,000 Population.

	1904.		1903.		1902.		1901.	
	Phthisis.	Other Tubercular Diseases.	Phthisis.	Other Tubercular Diseases.	Phthisis.	Other Tubercular Diseases.	Phthisis.	Other Tubercular Diseases.
Urban Districts ...	1·004	·455	·879	·397	·705	·338	·897	·526
Rural Districts ...	·806	·346	·886	·303	·768	·465	·868	·372
Administrative County	·951	·426	·881	·371	·723	·374	·888	·481
England and Wales ...	...	...	1·203	·539	1·233	·508	1·264	·543

The County death-rate from tubercular diseases generally is somewhat above the average of recent years, the rate for Phthisis in the Urban Districts being rather a high one for Essex, but this, as well as all the other rates in tables VII. and VIII. are as usual well below the rates for the country at large during recent years. The Essex death-rate from Tubercle resembles that from Cancer, in being persistently lower than that for England and Wales.

Comparing the various districts, the highest urban Phthisis death-rate is furnished by Waltham Holy Cross (1·63) followed by Clacton (1·56) and excluding very small districts, by Leyton (1·20), East Ham (1·19) and Southend (1·19). Curiously enough, Clacton last year also occupied second place, with an almost identical death-rate (1·57). The highest rural death-rates are those of Lexden and Winstree (1·41), Braintree (1·27) and Tendring (1·04). At the opposite end of the scale comes Woodford (·41), amongst the urban rates and Billericay (·26),

amongst the rural. See table. Billericay recorded the lowest Phthisis death-rate in 1903 also. The number of reports which refer especially to preventive methods adopted against Tubercle is not large. Several, however, amongst which that for Colchester is conspicious, deal with the subject in considerable detail. Colchester, Waltham Cross, and Woodford started systems of voluntary notification during the year, and Barking is considering the advisability of this step.

Several other reports, including those for Walthamstow, Southend and Braintree (R) recommend (or suggest) that such system should be instituted. The other measures adopted in Woodford and Waltham Cross are, free disinfection after deaths from Phthisis and the distribution of leaflets containing instructions as to management of cases, &c., in houses where notifications are received. Dr. Savage's account of the procedure on receipt of notifications at Colchester may be quoted in extenso, as it epitomises most of the procedure recognised at the present time, as generally practicable in these cases. "Every case is visited and careful inquiries made as to their family history, how the infection was acquired, the precautions being taken, the sanitary condition of the house, &c. The exact ways the disease is spread are then explained to the patient, if the medical attendant has not already done this, and printed instructions are left with the patient. If necessary the house or room is disinfected to give the patient a fresh start with uninfected surroundings. Any unsanitary conditions are remedied. If the patient is too poor to provide himself with a pocket spittoon one is given to him."

The value of notification will be found to depend principally upon the steps taken as a sequel, and if the above measures are thoroughly carried out in all cases where notification is adopted much good will surely result The inquiries referred to frequently bring to light unnotified and perhaps unsuspected cases, and the instructions given to the patient may be so framed as to benefit not only the community, but also himself. In both directions the benefit will be greater the earlier in the history

of the case the notification is received. Dr. Savage lays stress upon this, and records that from this point of view the Colchester notifications are disappointing. This, however, is apt to be the case when notification is first started, the most advanced and therefore the most obvious cases being first notified. A district providing gratuitous examination of sputum may hope to secure earlier notification later on.

The Walthamstow report suggests that institutions should be provided for advanced and incurable cases, in order, by isolating them, to protect the community. This very reasonable position is rapidly advancing towards the stage of "practical politics" (it is under contemplation at Brighton for instance), and would doubtless be of great benefit to other inmates of the houses involved. It has in many of the most necessitous cases been carried out for many years by the poor-law Infirmaries. As Dr. Savage points out however, the *range* of infectiousness in the earlier stages is much greater, though the *degree* is less, and on this account it is very necessary to exercise control over cases throughout the whole of their course. Probably the most effective method of doing this is by a short institutional training, followed by careful supervision of the patient, who thus first learns thoroughly how to take care of his own health and that of others, and is afterwards not allowed to forget what he has been taught. By this means occupational infection, one of the main means of spread of the disease may be combatted, the institution for isolation of advanced cases being of use only to prevent home infection. It is to be hoped that a County Institution for one or both of these purposes, or for attempting the cure of suitable cases, will before long be established in Essex. As suggested in the Report of the Medical Officer of Health for Cheshire for 1903, the whole County might be made a hospital district under the Isolation Hospitals Act, 1893, for this purpose, and in some cases different unions might with advantage combine to provide the accommodation required for paupers, or in various other ways action might be taken in the matter. The Dunmow report suggests

that cottages might be acquired and altered so as to be suitable for the treatment of appropriate cases.

Other suggestions for dealing with the disease, besides voluntary notification and sanatorium treatment, put forward in various reports this year are :—free examination of sputum (Walthamstow), disinfection of premises after deaths (Dunmow and Braintree (R.)), bye-laws against spitting, especially on trams (Walthamstow), and supervision of notified cases (Walthamstow). This latter measure should of course in all cases be adopted in conjunction with notification.

The districts mentioning steps at present taken, besides Colchester and Woodford, whose mothods have already been described, are Walthamstow and Southend, which disinfect after death and Braintree (R.) which does so occasionally, and Epping (U.), which issues leaflets only. Besides disinfection, pamphlets are issued at Southend, and the sanitary circumstances of the cases inquired into. The reports from Barking and Dunmow mention that at present no steps at all are taken there to cope with the disease.

The question whether some of the hospitals erected for the isolation of Small-pox cases could not be utilized during interepidemic periods for treatment of Phthisis patients does not appear to have been considered in any district.

SECTION II.

Prevalence of Infectious Disease.

TABLE XIII.

Total Number of Cases of Infectious Diseases Notified 1892-1904.

Year.	Small-pox	Scarlet Fever.	Diphtheria and Membranous Croup.	Fevers—Typhoid and Continued.	Puerperal Fever.	Erysipelas.	Totals.	Rate per 1,000 population.
1904	112	3,534	1,764	453	51	812	6,726	7·4
1903	96	2,528	1,659	589	42	759	5,664	6·4
1902	1334	3,251	2,017	987	44	857	8,477	9·9
1901	227	2,961	2,628	790	40	716	7,362	9·1
1900	18	2,702	2,395	840	54	718	6,718	8·3
1899	3	2,769	1,712	874	52	803	6,213	7·9
1898	5	2,371	1,418	854	30	664	5,342	7·2
1897	0	2,956	1,256	773	48	710	5,743	8·2
1896	19	2,931	1,437	888	43	733	6,051	9·0
1895	63	2,482	1,738	712	26	661	5,682	8·9
1894	420	2,511	1,619	648	37	785	6,020	9·5
1893	235	3,952	2,009	776	61	1,100	8,133	13·3
1892	33	3,013	1,613	490	24	797	5,970	10·0
Average for the 13 years	197	2,920	1,790	744	42	777	6,469	8·9

Table XIII. records the notifications made during 1904, and contrasts them with those of former years. There were no cases of Cholera, Plague, Typhus, or Relapsing Fever to record. There is as usual a discrepancy between the figures given in the monthly returns (6,655) and those of the Annual Reports (6,726).

More cases than in 1903 have been notified of all the notifiable diseases, except Typhoid and Continued Fever, but the rate per 1,000 population is lower than any previously recorded, except in the years 1903 and 1898. The number of notifications is a little above the average for the last 13 years, but notwithstanding this, the increase of population has led to the rate for 1904, 7·4, being one of the lowest recorded.

The number of deaths resulting from the notifiable diseases is again very low in proportion to the number of notifications. The 6,726 notifications have been followed by 354 deaths, or a death-rate of 1 per 19 cases notified, exactly the same as in 1903, which was commented upon in last year's report, as being exceptionally low, and pointing to the prevalence of a very mild type of disease.

Of the 6,726 cases, 5,360 occurred in the Urban, and 1,366 in the Rural Districts. Out of every 1,000 persons in the former districts 8·0 have suffered from one of the notifiable infectious diseases during the year, whilst in the latter districts 5·6 persons have been attacked. These rates, though a little higher than last year's are considerably lower than the averages for the 13 years preceding 1904 (10·4 and 7·7).

Table XIII. shows further that there has been no way excessive prevalence of any of the individual diseases included therein. There has been some excess in the case of Scarlet Fever, and Small-pox has not died out as might have been hoped after the epidemic of 1901-2.

Table XIV. gives the number of cases notified in each district, together with the diseases which have been most prevalent during the year.

In proportion to population most cases have occurred in Romford Rural and Braintree Urban Districts. The former had the second largest incidence last year, but the latter had for several years previous to 1904 been exceptionally free from infectious disease. Halstead Urban, first on the list last year, is third this year. Frinton is the only district which has

Distribution throughout the County of Compulsorily Notifiable Infectious Diseases Generally.

TABLE XIV.

	No. of Cases Notified.	No. per 1,000 Inhabitants.	Diseases most prevalent.
Urban Districts.			
Barking	285	10·8	Diphtheria and Scarlet Fever
Braintree	81	15·2	Scarlet Fever
Brentwood	39	6·4	Diphtheria
Brightlingsea	8	1·7	Scarlet Fever and Enteric Fever
Buckhurst Hill ...	14	2·8	Scarlet Fever
Burnham	16	4·9	Erysipelas and Diphtheria
Chelmsford	37	2·8	Scarlet Fever
Chingford	26	5·2	,,
Clacton	54	7·0	Scarlet Fever and Diphtheria
Colchester	372	9·4	Scarlet Fever
East Ham	1256	10·7	,,
Epping	5	1·2	Erysipelas
Frinton	0	0	
Grays	117	7·7	Scarlet Fever
Halstead	70	11·5	Diphtheria
Harwich	113	10·7	Scarlet Fever
Ilford	598	8·5	Scarlet Fever and Diphtheria
Leigh-on-Sea	9	1·9	Enteric Fever
Leyton	828	8·0	Scarlet Fever
Loughton	8	1·6	Diphtheria
Maldon	45	8·0	Scarlet Fever
Romford	94	6·4	Diphtheria
Saffron Walden ...	25	4·3	Scarlet Fever
Shoeburyness	17	3·9	Enteric Fever
Southend-on-Sea ...	167	4·0	Diphtheria
Waltham Holy Cross ...	17	2·5	Erysipelas
Walthamstow	975	8·8	Scarlet Fever
Walton-on-the-Naze ..	5	2·3	,,
Wanstead	53	5·1	Diphtheria and Scarlet Fever
Witham	17	4·8	Scarlet Fever and Enteric Fever
Wivenhoe	18	7·2	Scarlet Fever
Woodford	81	5·5	Diphtheria and Scarlet Fever
	5360	8·0	
Rural Districts.			
Belchamp	17	3·5	Scarlet Fever
Billericay	73	4·8	Scarlet Fever and Diphtheria
Braintree	86	4·7	Scarlet Fever
Bumpstead	15	6·2	Diphtheria and Erysipelas
Chelmsford	69	2·9	Scarlet Fever
Dunmow	84	5·4	,,
Epping	79	6·2	Scarlet Fever and Diphtheria
Halstead, No. 1 ...	7	1·5	Diphtheria and Scarlet Fever
Halstead, No. 2 ...	35	6·1	Scarlet Fever
Lexden and Winstree ...	98	5·1	Diphtheria and Scarlet Fever
Maldon	94	6·4	Scarlet Fever and Enteric Fever
Ongar	44	4·4	Small-pox
Orsett	108	4·9	Scarlet Fever and Erysipelas
Rochford	86	5·5	Enteric Fever
Romford	360	17·6	Diphtheria and Scarlet Fever
Saffron Walden ..	24	2·3	Scarlet Fever
Stansted	18	2·6	Diphtheria and Erysipelas
Tendring	69	3·9	Scarlet Fever
	1366	5·6	

remained free from such diseases throughout the year. All the populous Urban Districts have exceeded the average Urban rate except Leyton, which equals it, and Southend, which has the low rate of 4·0, exactly one half the Urban average. On the other hand Barking, East Ham, Colchester, Walthamstow and Ilford in the order named, all furnish rates in excess of the Urban average.

SMALL-POX.

TABLE XV.

Urban Districts.	No. of Cases.	No. of Deaths.	Rural Districts.	No. of Cases.	No of Deaths
Barking	0	0	Belchamp	0	0
Braintree	2	0	Billericay	0	0
Brentwood	0	0	Braintree	2	0
Brightlingsea	0	0	Bumpstead	0	0
Buckhurst Hill ...	0	0	Chelmsford	1	0
Burnham	4	1	Dunmow	1	0
Chelmsford	0	0	Epping	0	0
Chingford	0	0	Halstead 1	0	0
Clacton	1	0	,, 2	0	0
Colchester	2	0	Lexden & Winstree ...	0	0
East Ham	0	0	Maldon	16	0
Epping	0	0	Ongar	5	0
Frinton	1	0	Orsett	2	0
Grays	0	0	Rochford	2	0
Halstead	2	0	Romford	0	0
Harwich	11	0	Saffron Walden ...	0	0
Ilford	0	0	Stansted	0	0
Leigh-on-Sea	10		Tendring		
Leyton	0	0			
Loughton	0	0			
Maldon	0	0			
Romford	0	0			
Saffron Walden ..	0	0			
Shoeburyness	1	0			
Southend-on-Sea ...	0	0			
Waltham Holy Cross ...	49	1			
Walthamstow	0	0			
Walton-on-the-Naze ...	0	0			
Wanstead	0	0			
Witham	0	0			
Wivenhoe	0	0			
Woodford				29	0

The history of 1904 as regards Small-pox resembles very closely that of 1903. In both years the disease showed itself in 17 out of the 50 districts in the County, the total number of cases notified being 96 in 1903, and 112 in 1904. Eleven

d stricts had cases in both years. The fatality was very much less last year than in 1903, the 112 cases causing only two deaths, or a fatality rate of 1·8 deaths per hundred notifications*, whereas in the former year the corresponding rate was 8·3 per cent. Even 8·3 is a low rate, the usual fatality in Small-pox being about 35 per cent. for the unvaccinated, and varying from 10 per cent. to 2 per cent. for the vaccinated according to age, and number and quality of marks (Small-pox Commission). The condition as to vaccination of persons attacked is for the most part unstated in the district reports, but at least 14 of the victims are stated to have been unvaccinated, and the probability is that many more were in the same condition. Fourteen unvaccinated cases would at the usual fatality rate account for five deaths as against the two which occurred amongst the total 112 cases, and as these 14 form but a fraction of the total unvaccinated cases, the deaths might well have numbered 15-20 instead of only two.

There are two possible explanations of this exceedingly low fatality—mildness in type of the disease, and increased protection of the population by the vaccination carried out during the epidemic of 1901-02. The latter factor has doubtless had a considerable influence, but is quite incapable of explaining the lowered fatality of 1904 as compared with 1903, and no doubt can be entertained that the type of disease at present prevalent is a very mild one. This has been observed elsewhere of late, in America for instance as well as England. In London the fatality rate fell from 16·9 in 1902 to 3·1 in 1903. The Essex rate for 1902 was 13·6. This mildness of type is also illustrated by the success with which outbreaks have been stamped out. Thus in Braintree Rural District Dr. Black observes that seven separate outbreaks have occurred since April, 1902, without any secondary cases resulting. At times, as in the great epidemic of 1871-72, Small-pox appears to assume greatly increased severity and infectivity, and at other

*Three deaths should have been certified as due to Small-pox, the additional death being that of a child in Walthamstow, wrongly attributed to Chicken-pox.

times cases of the disease may be brought extensively in contact with even unprotected persons without causing any spread. The obvious lesson to deduce from these facts is that preventive measures, as a rule completely successful, may at any time fail to achieve their object, and that as regards the organization of preparations for dealing with extensive outbreaks in an imperfectly vaccinated community, the only safe method is "in time of peace to prepare for war."

Very few of the cases occurring in 1904 have been traced to infection carried by tramps, whereas in 1903 the majority of the cases were traced to this origin. The mistaken diagnosis of cases of Small-pox as Chicken-pox on the other hand has accounted for a considerable proportion of this year's cases. Forty-one cases at Walthamstow are attributed to this error, and there is considerable ground for suspicion that two cases at Rochford and one at Ilford had a similar origin. This most serious mistake would seldom if ever be made if the rule of dealing with all doubtful cases as possibly Small-pox till proved not to be were followed. The mistake of treating as Small-pox a case of Chicken-pox is a very venial one, whereas the opposite error may have most terrible consequences, as in the case of the Montreal outbreak of 1885, where the 3,164 deaths are said to have been attributable to such a mistaken diagnosis. Chicken-pox in Glasgow is isolated in the Small-pox hospital as a matter of routine, cases sent in being thrice vaccinated on the first three days after admission. The protection so established prevents Small-pox infection. This method of dealing with cases of undoubted Chicken-pox would perhaps scarcely commend itself in Essex, but the fact that it is successfully carried out in Glasgow shows how little hesitation need be felt about treating as Small-pox any case where reasonable doubt exists, and even, with proper precautions, isolating such patients along with Small-pox cases if separate accommodation is not available.

Several cases are mentioned where the disease was contracted at funerals.

Chelmsford (U.) Four cases occurred, all amongst the lowest class of the population. Two were tramps and two belonged to the lowest class of the labouring type. The only case notified in Chelmsford Rural District belonged to the same class. The source of infection does not appear to have been traced. Dr. Newton advocates compulsory re-vaccination as the best means of preventing the disease, especially amongst persons of this class.

Grays. The single case which occurred is interesting in that the patient was a man working with house refuse brought from London for the purpose of brickmaking. While it must not be assumed that this was the channel of infection, the history is at least suggestive. Cases had occurred in Orsett in February and March, but this case was notified in May.

Harwich. Two cases occurred, one a steward on one of the railway steamers, and the other his nurse, who refused re-vaccination, and suffered from a severe attack in consequence. All inmates of the first patient's house were re-vaccinated, and escaped infection. This case illustrates well the absolute necessity of insisting upon the re-vaccination of all the staff engaged in dealing with an outbreak of Small-pox.

Ilford. Eleven cases occurred, six of them in the West Ham Asylum. These were infected almost simultaneously, probably by visitors from West Ham, where there were several cases at the time. Prompt isolation, and vaccination of the other inmates, prevented any spread in the Asylum. One of the other five cases was the unvaccinated infant child of a night attendant in the affected ward at the Asylum, who developed the disease practically at the same time as the Asylum cases. The inference seems inevitable that the infection was carried from the ward by the father, a "healthy contact," to his unprotected child. This is of some interest because, as recently pointed out by Dr. Niven, Medical Officer of Health for Manchester, transmission by healthy "contacts" is rarely met with.

Another of the Ilford cases occurred in a woman who had been visiting a supposed case of Chicken-pox in West Ham, and in connection with another a conviction was obtained against the patient's brother for failure to notify. A case of Small-pox had been removed from a house in which were two men, who refused vaccination, and were therefore kept at home and visited by the Inspector. At the end of the incubatory period, dating from the removal of the first case, the inspector was informed by the elder brother that the younger had gone to business. Two days later Dr. Stovin, on visiting the house, was told the same story, but happened to see the younger brother's shadow from the door, went in, and found him with a well marked eruption which had certainly been out two or three days. Next day the elder also fell ill. On coming out of hospital he was convicted and fined 10s. and costs. The necessity for extreme vigilance in the observation of contacts, especially where vaccination is refused, or is effected too late to secure immunity, could scarcely be better illustrated. Had it not been exercised in this case a serious outbreak might have resulted.

Leyton. Ten cases occurred, for the most part unconnected. Two are supposed to have been contracted at funerals.

Walthamstow. The largest outbreak of the year occurred here, 49 cases being notified. On June 13th, owing to information received from the Medical Officer of Health of Stepney, that an undertaker who had buried a Walthamstow child, certified to have died from Chicken-pox was suffering from Small-pox, Dr. Clarke visited the house indicated and found five unvaccinated children suffering from Small-pox in its various stages. Some were convalescent, and were going about freely in the neighbourhood. Between this date and the 31st July, when the last notification was received, 36 additional cases were notified, mostly from the same neighbourhood. Amongst other preventive measures adopted, leaflets advising re-vaccination were distributed in the neighbourhood of the cases. Children who had come in contact with cases were excluded from

school for 21 days, except vaccinated children under ten years old, and re-vaccinated children over that age.

The extra and unlooked for expenditure was £728 11s. 9d.

Braintree (R). There were two separate importations but no spread in either case.

Dunmow. One modified case contracted in London was notified. Vaccination is well carried out in this district.

Ongar. An outbreak occurred in the Stanford Rivers Union Workhouse, 16 cases being notified between April 2nd and 22nd. The disease was introduced by a man who had been a patient in one of the wards of the London Hospital, where Small-pox had broken out at the time. He developed a slight rash after his return to the workhouse, but its nature was overlooked. The first secondary case occurred twelve days later. All the inmates were vaccinated and strictly quarantined and the patients, as discovered, removed and nursed in tents. No outside cases occurred. A special report was prepared. The age distribution of the patients was remarkable. Nine of the patients were over 60, one being 92 years old. He recovered. It is safe to say that in a normal population such an age distribution could never occur, Small-pox being chiefly a disease of the young, but in the men's ward of a workhouse it is only what is to be expected, the inmates being for the most part elderly, while any children with whom they came in contact would be well protected by vaccination.

Orsett. Five cases occurred, in two outbreaks. In neither case could the source of infection of the first patient be traced. The two secondary cases in the second outbreak resembled the men referred to at Ilford, in that they brought the disease upon themselves by the deliberate avoidance of preventive measures. They were two men lodging in the same room as the first patient. When called on they were always said to be out, and their names even were refused. Legislation is in force in Liverpool compelling accurate information in such cases, under a penalty.

Rochford. Two cases occurred, a man and his wife. There appeared some likelihood that the infection was conveyed by a lady visitor who had stayed with them while recovering from chicken-pox for which she had been strictly isolated. The man when taken ill attended a London Hospital, and pointed out the spots, but no notice was taken of them. Modified cases, such as his was, may easily be overlooked by medical men unfamilar with the disease.

Romford. Two cases occurred at Dagenham. Both in the course of their avocation, went within the infective zone of the West Ham Small-pox Hospital.

Scarlet Fever.

This disease has been much more prevalent than in 1903, but of a milder type, the fatality having fallen from 2·2 to 1·78 The number of cases notified, 3534, is greater than any year since 1893, but in proportion to population the incidence, as may be seen on reference to the charts on page 45 is rather below the average of recent years. No month shows any excessive prevalence except November, in the chart for Rural Districts. A considerable outbreak in the Romford district about this time largely contributed to this, and the disease was also very prevalent at the time in Halstead II.

Although there were just over 1000 more cases notified in 1904 than in 1903, the death rate rose only from ·062 to ·069, owing to the considerable decrease in the fatality. This decrease is the more satisfactory as a tendency to increase in severity of type was observable from 1900 to 1903, fatality increasing from ·96 to 2·2. The highest fatalities recorded by individual districts, excluding cases where the figures are too small to be of value, are Tendring (7·5), Dunmow (5·0) and Barking (3·2), see table. Tendring yielded the highest fatality rate in 1903 also (10 per cent.). The fatality in the Urban and Rural Districts as a whole is almost exactly the same (1·78 urban and 1·80 rural). The highest death rates are Braintree (U.) (·37), Witham (·28), Romford (R.) (·20) and Dunmow (·19). The

urban death rate, (·08) is much higher than the rural (·05) in spite of the fatalities being equal on account of the much greater prevalence in the urban districts.

The greatest prevalence in any one district was in Braintree U. (14·6 cases per 1,000 population), Harwich (8·7 per 1,000) and Romford (R.) (7·15 per 1,000). These figures in the case of Braintree and Romford district are higher than any recorded from 1891 onwards. The Braintree figure, indeed, has only six times been exceeded by any district during the fourteen years. The only district which remained free from the disease throughout the whole year was Frinton, as in 1902 and 1903 successively.

Table XVI. shows that both urban and rural districts isolate about half the cases notified. Fourteen districts had over 50 cases to deal with, and the numbers removed to hospital by these, varied from 99 per cent. in Romford (R.) to 0 in Dunmow. Barking, which isolated the highest percentage of Diphtheria cases, comes second in the case of Scarlet Fever (78 per cent.) It is somewhat curious that the four districts (Braintree (U.), Harwich, Romford (R.) and Colchester) where the greatest prevalence occurred, all isolated more than the average proportion of cases.

Several districts refer to the mildness of the prevalent type of disease. Leyton, for instance, records 497 cases with six deaths as against 397 with 13 deaths in 1903. In Barking, on the other hand, the type of disease met with during the last two years has been much more severe than formerly, the glandular type predominating.

The Medical Officer of Health for Colchester discusses the effect of school closure upon Scarlet Fever outbreaks. Both summer and winter holidays synchronised with a period of freedom from the disease, followed by recrudescence when the Schools re-opened. These rather striking results seem capable of explanation on two suppositions. "The first and most obvious one is that the disease was abruptly checked because it was being spread by aggregation of children at school, and

Scarlet Fever.

TABLE XVI.

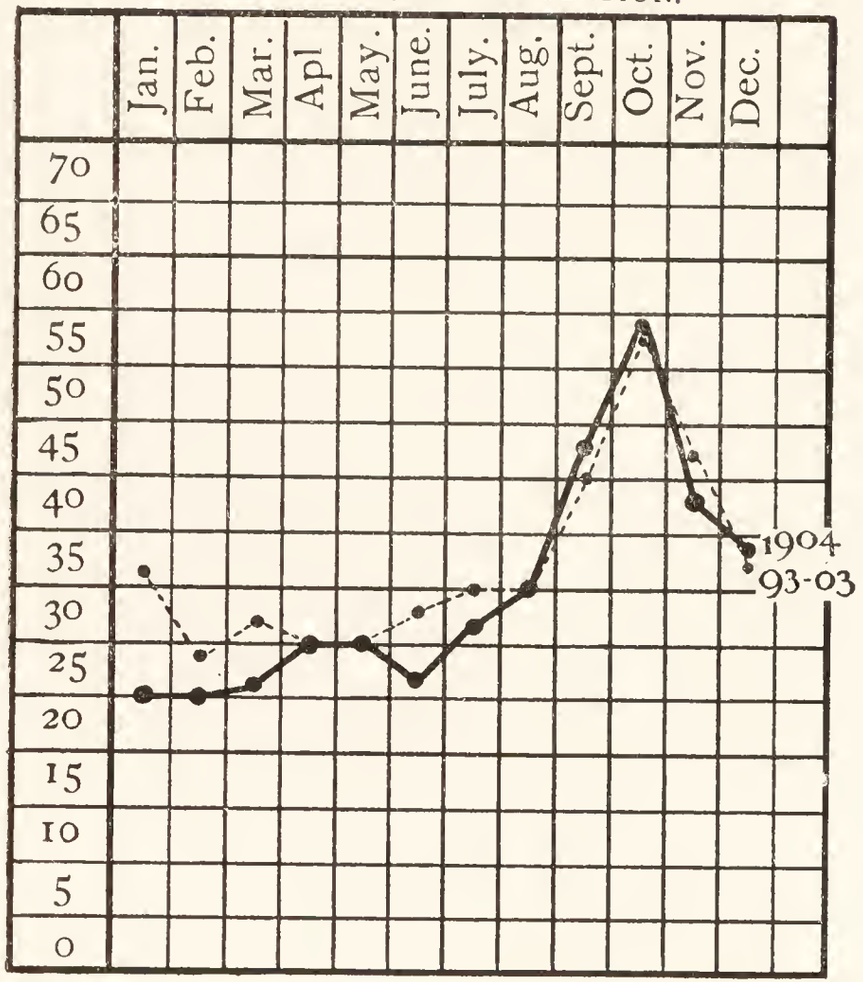
DISTRICTS.	No. of cases notified.	No. of deaths.	No. of cases removed to hospital.	Cases per 1,000 population.	Deaths per 1,000 population.	Deaths per 100 cases.	Percentage of cases removed to hospital.
Urban Districts.							
Barking	94	3	71	3·5	·11	3·2	76
Braintree	78	2	43	14·6	·37	2·6	55
Brentwood	7	0	2	1·15	0	0	29
Brightlingsea	4	0	0	9	0	0	0
Buckhurst Hill	11	0	6	2·2	0	0	55
Burnham	1	0	0	·3	0	0	0
Chelmsford	20	0	15	1·5	0	0	75
Chingford	21	0	1	4·2	0	0	5
Clacton	34	0	28	4·4	0	0	82
Colchester	257	6	154	6·5	·15	2·3	60
East Ham	711	10	334	6·1	·09	1·4	47
Epping	1	0	1	·25	0	0	100
Frinton	0	0	0	0	0	—	—
Grays	74	0	33	4·9	0	0	45
Halstead	9	1	?	1·5	·16	11·1	?
Harwich	92	1	55	8·7	·10	1·1	60
Ilford	224	5	140	3·75	·08	2·2	62
Leigh-on-Sea	1	0	0	·2	0	0	0
Leyton...	497	6	247	4·8	·06	1·2	50
Loughton	1	0	?	·2	0	0	?
Maldon	27	0	18	4·8	0	0	67
Romford	29	1	29	2·0	·07	3·4	100
Saffron Walden	18	0	15	3·1	0	0	83
Shoeburyness	0	0	0	0	0	—	—
Southend-on-Sea	49	0	40	1·2	0	0	82
Waltham Holy Cross ...	6	0	4	·9	0	0	67
Walthamstow	527	14	221	4·7	·13	2·7	42
Walton-on-the-Naze ...	2	0	0	1·0	0	0	0
Wanstead	21	1	10	2·0	·10	4·8	48
Witham	12	1	0	3·4	·28	8·3	0
Wivenhoe	11	0	0	4·4	0	0	0
Woodford	30	0	24	2·0	0	0	80
Totals	2869	51		4·30	·08	1·78	52*
Rural Districts.							
Belchamp	11	0	0	2·3	0	0	0
Billericay	25	0	20	1·4	0	0	80
Braintree	69	0	27	3·8	0	0	39
Bumpstead	1	0	0	·4	0	0	0
Chelmsford	48	0	26	2·0	0	0	54
Dunmow	60	3	0	3·9	·19	5·0	0
Epping	31	0	26	2·4	0	0	84
Halstead, No. 1	3	0	0	·65	0	0	0
Halstead, No. 2	29	0	22	5·1	0	0	76
Lexden and Winstree ...	36	1	0	1·9	·05	2·8	0
Maldon	60	0	12	4·1	0	0	20
Ongar	9	0	0	·9	0	0	0
Orsett	56	1	28	2·6	·05	1·8	50
Rochford	26	0	?	1·7	0	0	?
Romford	146	4	144	7·15	·20	2·7	99
Saffron Walden	11	0	7	1·1	0	0	64
Stanstead	4	0	1	·6	0	0	25
Tendring	40	3	0	1·9	·14	7·5	0
Totals	665	12		·71	·05	1·80	49*

*Excluding districts which do not state number of cases removed.

SCARLET FEVER.

URBAN DISTRICTS.

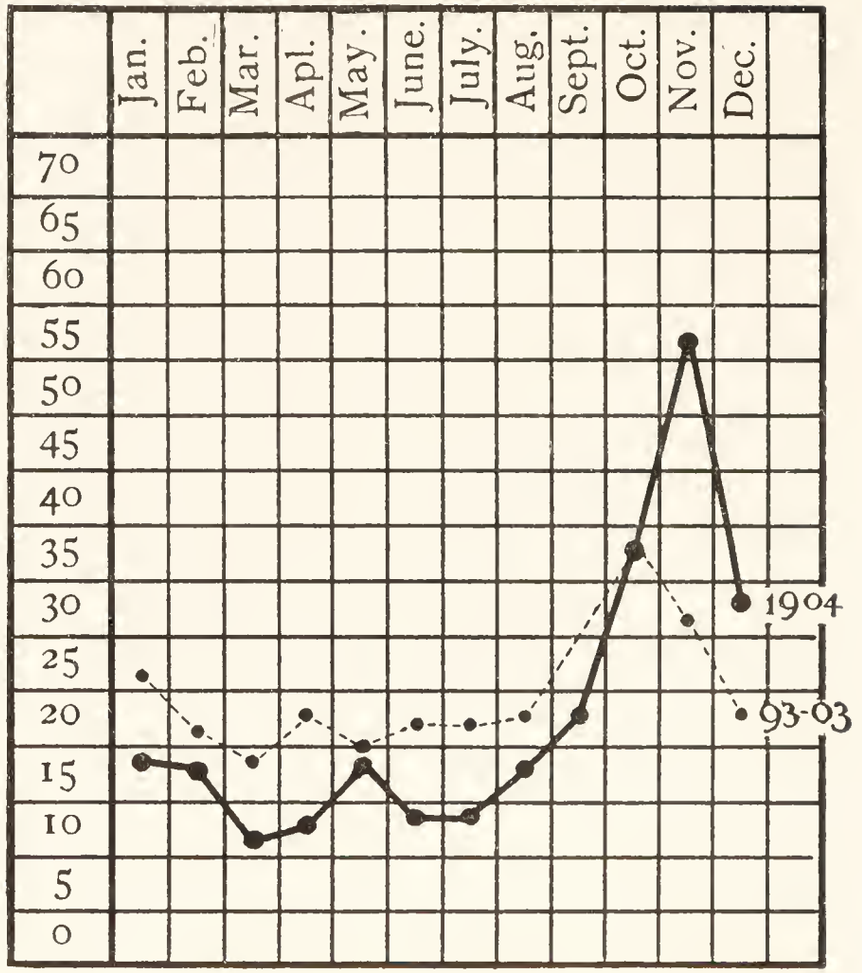
CASES PER 100,000 POPULATION.



SCARLET FEVER.

RURAL DISTRICTS.

CASES PER 100,000 POPULATION.



when this was removed the infection at once ceased. The other supposition is that while at school the school children are subject to supervision, and their absence is made the cause of enquiry and, if necessary, investigation, so that cases of Scarlet Fever, even if mild are usually, sooner or later, and generally sooner, brought to light. In both suppositions, school influence is predominant, and I am not prepared to say how far either is the true one here; probably both are important and play a part."

The Medical Officer of Health of Ilford excluded from school on three separate occasions children in the peeling stage of Scarlet Fever, without any further case occurring in the class-room involved within a month. "It is rather curious that such was the case, and perhaps aids the belief that Scarlet Fever is more infectious in an early stage, or when a convalescent attends school with some discharge from the nose or ears. No disease appears to vary so much in its infectivity as Scarlet Fever. At one time, as above, it appears to be harmless; at another it spreads with persistent virulence." A similar experience is recorded from Barking.

Several reports refer to the difficulty of control of Scarlet Fever, owing to the mildness of type at present prevalent. The risk of losing an attendance medal will in some such cases induce parents to keep such a mild case at school throughout the whole of its illness. This difficulty could be overcome to a great extent by more efficient school supervision, both by teachers and by medical officers appointed for the purpose.

Several reports refer to the vexed question of the efficacy of hospital isolation for Scarlet Fever. The Medical Officer of Health for Woodford and Halstead (U.) have no doubt that it repays the expense in their districts. On the other hand Dr. Clarke at Walthamstow writes:—"One wonders if the expense incurred in the isolation of Scarlatina is justified or necessary, considering how little is done for Measles prevention with four times the death rate. The opinion of Dr. Savage at Colchester is that the great value of hospital isolation for Scarlet Fever is

not its indiscriminate application, but to remove cases from houses or areas where isolation is impossible, and the risk of spreading the disease very great. For such cases it is invaluable." This position coincides closely with that taken up by myself upon the subject, as described in last year's report.

Scarlet Fever.

TABLE XVII.

Ages of Persons attacked and Fatality at Different Ages.

	0-1	1-5	5-15	15-25	25-65	65 & upwards
Urban Districts –						
Cases notified	30	760	1687	230	83	1
Percentage of total notifications	1	27	61	8	3	
Deaths	3	26	15	5	2	0
Deaths per 100 notifications ...	10·0	3·4	·9	2·2	2·4	
Rural Districts –						
Cases notified	4	155	408	67	31	0
Percentage of total notifications	1	23	61	10	5	
Deaths	0	5	7	0	0	0
Deaths per 100 notifications ...	0	3·2	1·7	0	0	
Administrative County –						
Cases notified	34	915	2095	297	114	1
Percentage of total notifications	1	26	61	9	3	
Deaths	3	31	22	5	2	0
Deaths per 100 notifications ...	8·8	3·4	1·1	1·7	1·8	

Diphtheria and Membranous Croup.

The diminution in prevalence and fatality of Diphtheria and Membranous Croup, noted in the reports for 1902 and 1903, has not continued, but the position reached in 1903, has been all but maintained, the figures for 1904 corresponding closely with those of the previous year. The Rural figures are better than last year's, and the Urban not quite so good, so that the advantage held by the Rural over the Urban figures has been increased. Seven Urban Districts, Braintree, Brightlingsea, Buckhurst Hill, Chingford, Epping, Frinton and Witham, and one Rural District, Saffron Walden, entirely escaped infection. The districts at the other end of the scale, where the case-rate was

Diphtheria and Membranous Croup.

TABLE XVIII.

Case-rate and Death-rate per 1,000 Population, and Deaths per 100 Notifications, or Fatality.

	1904.			1903.			Thirteen years, 1890-1902.		
	Case-rate.	Death-rate.	Fatality.	Case-rate.	Death-rate.	Fatality.	Case-rate.	Death-rate.	Fatality.
Urban Districts	2·09	·20	9·7	1·89	·18	9·4	2·85	·46	16·1
Rural Districts	1·50	·11	7·3	1·87	·14	7·7	1·90	·32	16·8
Administrative County ...	1·93	·18	9·2	1·88	·17	8·9	2·46	·41	16·5
England and Wales ...	—	—	—	—	·18	—	—	·25	—

highest, were Romford Rural (8·8), Halstead Urban (8·5) and Barking (5·5). It is a remarkable fact that these three districts, in the same order, headed the list last year also. The risk of death if attacked by Diphtheria is (in Essex) somewhat less than half now of what it was ten years ago. This change has coincided with the introduction of Antitoxin as a curative agent. During the six years 1890-95 this remedy was unknown, and the average fatality rate in Essex was 19·8, varying from 20·8 in 1893 to 18·2 in 1891. The next three years do not serve for comparison. The remedy was becoming known but was little used, and its dosage was not understood. The six years 1899-1904 have therefore been selected for comparison. They furnish an average fatality rate of 11·3, with a continuous fall from 14·3 in 1899 to 8·9 in 1903 and 9·2 in 1904. Thus the fatality, which prior to the use of Antitoxin was about 20 per cent., is now about 9 per cent.; or in other words the 163 deaths of 1904 would have been 362, had the fatality of 10 years ago prevailed. It is a pity that this fall in fatality should not have been maintained during 1904, but there is no apparent reason to anticipate that the check will be more than temporary. The disease, instead of being a most formidable one, has now

almost ceased to endanger life if the proper steps (efficient antitoxin treatment) are taken in good time, and there is every reason to anticipate a further fall in the fatality of the disease as this fact becomes more generally realised, and as facilities for bacteriological diagnosis are improved and increased. It is almost entirely the neglected cases which furnish the death-rate.

The fatality in different districts differs, as usual very greatly, as may be seen by reference to Table XIX. Thus dealing only with districts from which over fifty cases are reported, and where accordingly the figures are sufficiently large to be significant, Southend records a fatality rate of only 2·6 as against 13·9 and 14·2 from East Ham and Walthamstow respectively. The contrast is all the more striking in view of the fact that all three are large urban districts, and that they all isolate about the same proportion of cases in hospital, about 60 per cent. As the circumstances are so similar, and as it cannot be supposed that superior treatment at Southend could account for such a difference, we must infer that the type of disease prevalent there was much milder than at Walthamstow and East Ham. Indeed, if the statement of Dr. Clarke that at Walthamstow one in every three who contracted (genuine) Diphtheria dies, be well founded, the type of disease in that district must be of exceptional severity, and about half the cases notified cannot have been genuine diphtheria.

But even though the disease at places so far apart as East Ham and Southend differs greatly in severity, it might be supposed that in contiguous as well as similar districts similarity would be met with. So far from this being so, the fatality at Barking is only 6·1 and at Ilford 5·5 against East Ham's 13·9. And local outbreaks even, in the same district, will differ greatly in severity. Thus in the Colchester report an outbreak of six cases is recorded where the virulence was so extreme that four died, three of them before the notification was received, as against a fatality of 12·5 for the borough generally. Obviously it would not require many cases of this type to explain the

Diphtheria and Membranous Croup.

TABLE XIX.

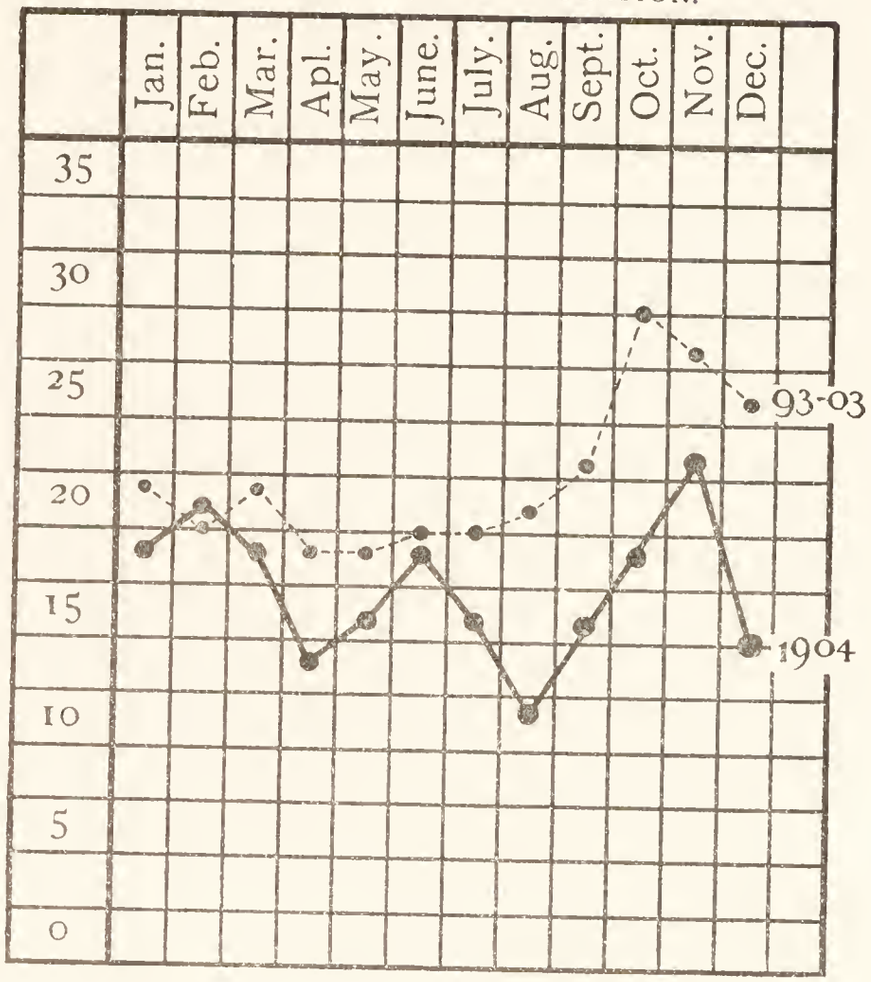
DISTRICTS.	No. of cases notified.	No. of deaths.	No. of cases removed to hospital.	Cases per 1,000 population.	Deaths per 1,000 population.	Deaths per 100 cases.	Percentage of cases removed to hospital.
Urban Districts.							
Barking	147	9	114	5·5	·34	6·1	78
Braintree	0	0	0	0	0	—	—
Brentwood	29	1	20	4·8	·16	3·4	69
Brightlingsea	0	0	0	0	0	—	—
Buckhurst Hill	0	0	0	0	0	—	—
Burnham	7	1	0	2·2	·31	14·3	0
Chelmsford	2	0	1	·15	0	0	50
Chingford	0	0	0	0	0	—	—
Clacton	15	3	11	1·95	·39	20·0	73
Colchester	56	7	30	1·4	·18	12·5	54
East Ham	339	47	219	2·9	·40	13·9	65
Epping	0	0	0	0	0	—	—
Frinton	0	0	0	0	0	—	—
Grays	11	0	4	·7	0	0	36
Halstead	52	3	?	8·5	·49	5·8	?
Harwich	2	1	0	·2	·10	50·0	0
Ilford	181	10	80	3·0	·17	55·	44
Leigh-on-Sea	2	0	0	·4	0	0	0
Leyton	154	14	58	1·5	·13	9·1	38
Loughton	6	1	?	1·2	·20	16·7	?
Maldon	10	0	6	1·8	0	0	60
Romford	45	3	45	3·1	·20	6·7	100
Saffron Walden	1	0	1	·2	0	0	100
Shoeburyness	2	0	2	·5	0	0	100
Southend-on-Sea	77	2	43	1·8	·05	2·6	56
Waltham Holy Cross ...	3	0	1	·4	0	0	33
Walthamstow	190	27	119	1·7	·24	14·2	63
Walton-on-the-Naze ...	1	0	0	·5	0	0	0
Wanstead	25	4	1	2·6	·42	16·0	4
Witham	0	0	0	0	0	—	—
Wivenhoe	6	0	0	2·4	0	0	0
Woodford	33	3	34	2·2	·20	9·1	100
Totals	1,396	136		2·09	·20	9·7	59*
Rural Districts.							
Belchamp	1	0	0	·2	0	0	0
Billericay	24	1	18	1·6	·07	4·2	75
Braintree	1	0	0	·05	0	0	0
Bumpstead	8	0	0	3·3	0	0	0
Chelmsford	9	0	1	·4	0	0	11
Dunmow	6	0	0	·4	0	0	0
Epping	28	3	19	1·5	·23	10·7	68
Halstead, No. 1	3	0	2	·7	0	0	67
Halstead, No. 2	1	0	1	·2	0	0	100
Lexden and Winstree ...	46	5	11	2·4	·26	10·9	24
Maldon	9	1	0	·6	·07	11·1	0
Ongar	11	0	0	1·1	0	0	0
Orsett	13	0	6	·6	0	0	46
Rochford	7	3	?	·4	·19	42·9	?
Romford	179	11	95	8·8	·54	6·1	53
Saffron Walden	0	0	0	0	0	—	—
Stansted	7	1	7	1·0	·15	14·3	100
Tendring	15	2	0	·7	·09	13·3	0
Totals	368	27		1·50	·11	7·3	44*

*Excluding districts which do not state number of cases removed.

DIPHTHERIA AND CROUP.

URBAN DISTRICTS.

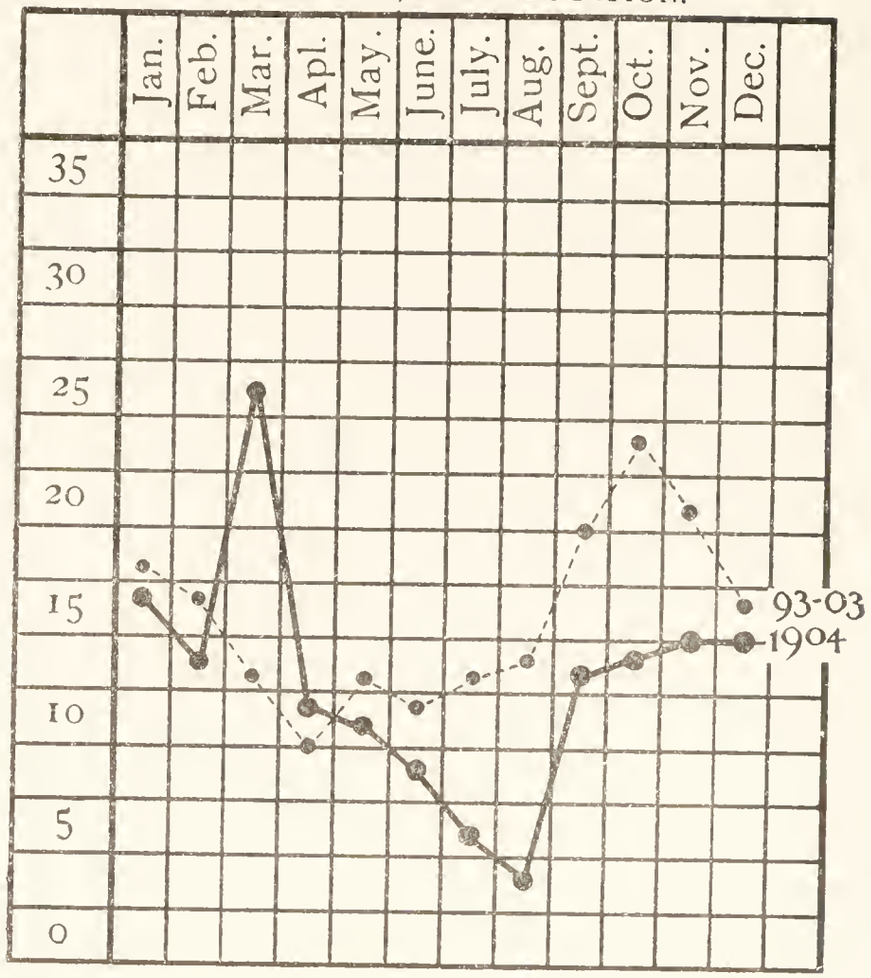
CASES PER 100,000 POPULATION.



DIPHTHERIA AND CROUP.

RURAL DISTRICTS.

CASES PER 100,000 POPULATION.



rise in East Ham's fatality from 6·6 in 1903 to 13·9 in 1904. The lesson to be drawn from these facts seems obvious. It is that no reliance whatever is to be placed upon fatality in Diphtheria as an index of the efficacy of treatment in individual districts. Doubtless the treatment of 1904 in East Ham resembled very much that of 1903, and yet the fatality more than doubled. When, on the other hand, really large areas are dealt with, the case is different, local variations tending to neutralise each other; and it is on account of the constancy of the county fatality rate during 1890-95, that its subsequent steady fall, coincident with the increasing use of antitoxin, is so suggestive of the efficacy of this treatment.

The highest death-rates recorded from individual districts are those of Romford R. (·54) and Halstead U. (·49), where also the prevalence was greatest. The death-rate of East Ham (·40) is also high for such a large population.

Reference to the charts on p. 51 shows that the proportional incidence kept on the whole well below the mean of past experience during the whole year in both Urban and Rural Districts. The month of March in case of the Rural Districts is an exception, the case-rate being just double the previous average. This was entirely due to the exceptional prevalence of the disease in Romford Rural District at that time, the figures from other districts being quite insignificant.

The extent to which hospital isolation is now carried out may be seen by reference to Table XIX. Two of the Urban Districts and one Rural District make no return on this head. Of the others, the Urban Districts removed to Hospital 59 per cent. of all cases notified, and the Rural 44. Eight of these districts had to deal with the diseases on a large scale, returning over 50 cases each, or a total of 1323 cases out of 1699 as to which information is available. Of these eight districts Barking isolates the greatest percentage of cases, 78 per cent. Then came East Ham with 65, Walthamstow 63, Southend 56, Colchester 54, Romford (R.) 53, Ilford 44, and Leyton 38

per cent. respectively. It is curious that the two highest percentages should be credited to districts where the isolation accommodation is entirely of a temporary nature.

Barking. During the first six months of the year the number of cases notified was 116, during the second six months only 29. In 1903, 197 cases were notified. Besides this decrease in prevalence the fatality rate also fell from 9·6 in 1903 to 6·2 in 1904 The combined effect of the two decreases is shown by the fall of the Diphtheria death-rate from ·76 in 1903 to ·33 in 1904. This is still, however, almost twice the county rate, ·18. This tendency to decreased prevalence and fatality in Barking contrasts sharply with the state of affairs in the neighbouring districts of East Ham and Ilford.

Brentwood. The incidence was heavier than any previously recorded. Eleven of the 29 cases occurred at the Hackney Training Schools. On inspection of these it was found that the water used for washing, and probably also in some cases for drinking, was derived from a pond into which the washings from the yards and floors of some of the urinals discharged.

Chelmsford U. Only two cases were notified, and those of a very mild type, giving a case-rate of ·15, the lowest on record. In 1901 this rate was 10·4.

Colchester. Particulars are given as to the time of administration of Antitoxin to the seven cases which died. In these cases Antitoxin was either not given, or given only on the fifth day or later, in all the cases except one, where it was given on the third day to a baby then extremely ill.

In only one out of 114 healthy contacts examined was the Diphtheria bacillus found (·88 per cent.) Last year the corresponding percentage was 19·8. Dr. Savage remarks on this :— " The difference is very striking and remarkable, and not very easy to account for. It is, however, very satisfactory, and points to a restricted distribution of the bacilli. One factor in its production is, I believe, due to the fact that the cases are notified earlier than formerly, and that the cases for removal

are taken away and swabbing of the contacts done at the earliest possible date, so that opportunities for the spread of the bacilli are restricted."

East Ham. The somewhat heavy fatality here has been already commented upon. A table is given bringing out, amongst other points, the fact that the fatality amongst cases treated in hospital was, as in 1903, higher than that of cases treated at home. On this point Dr. Beaumont remarks :—"The most severe cases are sent to the Hospital, and the mild kept at home. It frequently happens that a parent will keep the case at home until the condition of the patient is such that human aid can render but little service, and then, and not till then, a request is made for its immediate removal to Hospital."

Halstead U. This district in 1904, as in 1903, furnishes a higher case-rate than any other urban district. This is due to the fact that the epidemic which had prevailed during the last six months of 1903 continued throughout the first half of 1904.

Ilford. "Diphtheria," Dr. Stovin states, "has been much more prevalent during the past year than ever before." While this is true for the past eleven years, the case-rate in 1893 was more than twice, and that in 1891 nearly twice that of 1904. An outbreak occurred in June (36 cases in ten days) which was definitely traced to milk from a farm at Romford. Here three children of the farmer, and three children of one of his milkers were found to be suffering from Diphtheria. Steps were taken to prevent all who might have been brought in contact with the disease from engaging in daily work, and various other measures were adopted, but the sale of the milk was not prohibited. The outbreak thereupon quickly ceased, its acute stage, indeed, lasting only four days.

During the autumn there was a steady prevalence of Diphtheria, probably due to contact with mild cases during school hours. Certain schools were especially effected.

Leyton. The fatality, 9·3 per cent. compares favourably

with last year's figures, 14·6, the decrease being chiefly due, as in Scarlet Fever, to the milder form of the disease prevalent.

Southend. Various cases are chronicled where the evidence of disease was bacteriological only. In some instances these had given rise to definite clinical cases. The swabs submitted by doctors for examination numbered 569.

Walthamstow. The percentage of removals to hospital has increased from 50 in 1903 to 63 in 1904, and Dr. Clarke recommends that every case should be so treated. He comments on the necessity of patients realising that it is impossible for the doctor always to be right in his diagnosis. The practice, arising from want of room at the hospital, of sending home within a short time of admittance patients who were non-diphtheritic, has caused medical men to be chary and patients sceptical. This drawback will be removed when the accommodation now being added becomes available.

Wanstead. Of the 25 notifications, 21 were from the Infant Orphan Asylum, and of the remaining 4 two were not Diphtheria either clinically or bacteriologically, leaving two cases only from Wanstead proper.

Woodford. An outbreak occurred at Woodford Bridge, reaching its maximum during the school holiday in August. "The disease was for our district of rather a bad type," the fatality being 9·1 per cent. against an average of only 5·8 since 1898 and 10 since 1890.

Dunmow. Only a few sporadic cases occurred. An insanitary school may have caused some of them. Dr. Goodbody recommends that in addition to supplying Antitoxin, as they do at present, the Council should pay for the bacteriological examination of cases.

Epping R. A marked increase in the notifications occurred. The case-rate however only amounted to 1·5 per 1000, or ·43 below the county rate. This district indeed has been very free from Diphtheria during the last 14 years, the maximum rate

being 1.85, in 1894. Seven cases were notified from one house in Harlow where the sanitary arrangements were found to be very defective.

Romford R. Diphtheria, which was very prevalent in and around the village of Rainham during the previous year did not cease until about April, since when this locality has been free from this disease. Novertheless Romford again, as in 1903, furnishes the highest case-rate in the county, and this year the highest death-rate (·54) from Diphtheria also. The fatality was low (6·1) but not so low as last year. It is to be hoped that when the sewerage schemes for Rainham and Dagenham are in working order this unenviable preeminence will cease. It must be noted, however, that for the six years previous to 1903 there was but little Diphtheria in the district, and it is probable that this condition would recur even without the sanitary improvements now being effected.

Diphtheria and Membranous Croup.

TABLE XX.

Ages of Persons attacked and Fatality at Different Ages.

	0-1	1-5	5-15	15-25	25-65	65 & upwards
Urban Districts—						
Cases notified	15	455	691	128	106	1
Percentage of total notifications	1	32	50	9	8	
Deaths	8	86	39	1	0	0
Deaths per 100 notifications ...	53·3	18·9	5·6	·8	0	
Rural Districts—						
Cases notified	5	93	189	30	50	1
Percentage of total notifications	1	25	52	8	14	
Deaths	1	7	16	1	1	1
Deaths per 100 notifications ...	20·0	7·5	8·5	3·3	2·0	
Administrative County—						
Cases notified	20	548	880	158	156	2
Percentage of total notifications	1	31	50	9	9	
Deaths	9	93	55	2	1	1
Deaths per 100 notifications ...	45	17·0	6·2	1·3	·6	

Typhoid and Continued Fevers.

TABLE XXI.

Case-rate and Death-rate per 1,000 Population, and Deaths per 100 Notifications, or Fatality.

	1904.			1903.			Thirteen years, 1890—1902.		
	Case-rate.	Death-rate.	Fatality.	Case-rate.	Death-rate.	Fatality.	Case-rate	Death-rate.	Fatality.
Urban Districts	·50	·09	18·7	·70	·12	17·5	1·29	·18	13·8
Rural Districts	·49	0·7	13·2	·59	·10	16·8	·80	·13	16·2
Administrative County ...	·50	09	17·2	·67	·12	17·3	1·12	·17	15·1
England and Wales ...	—	.09	—	—	·10	—	—	·18	—

The above table shows that both the prevalence of and mortality from Typhoid Fever have been very much less than usual. They are indeed by a long way the lowest on record in the County. The low death-rate is entirely due to the phenomenally low case-rate, for the fatality, which was high in 1903, has remained about the same in 1904, falling considerably in the Rural Districts, but rising in the Urban. In this connection it may be noted that knowledge of the means of preventing Typhoid Fever is advancing much more rapidly than knowledge of the best means of treatment of the disease.

The cases and deaths in the Thames Valley are as under :—

TABLE XXII.

	Cases.	Deaths.	Case-rate.	Death-rate.
East Ham ...	61	14	·52	·12
Barking	18	5	·68	·19
Romford (Rural) ...	12	0	·50	·0
Orsett (Rural) ...	9	2	·41	·09
Grays	17	1	1·11	·07
Rochford (Rural) ...	36	7	2·30	·45
Leigh	6	1	1·26	·21
Southend	18	2	·43	·05
Shoeburyness ...	14	1	3·24	·23
Total	191	33	·71	·12

Typhoid, Continued, and Puerperal Fevers.

TABLE XXII.

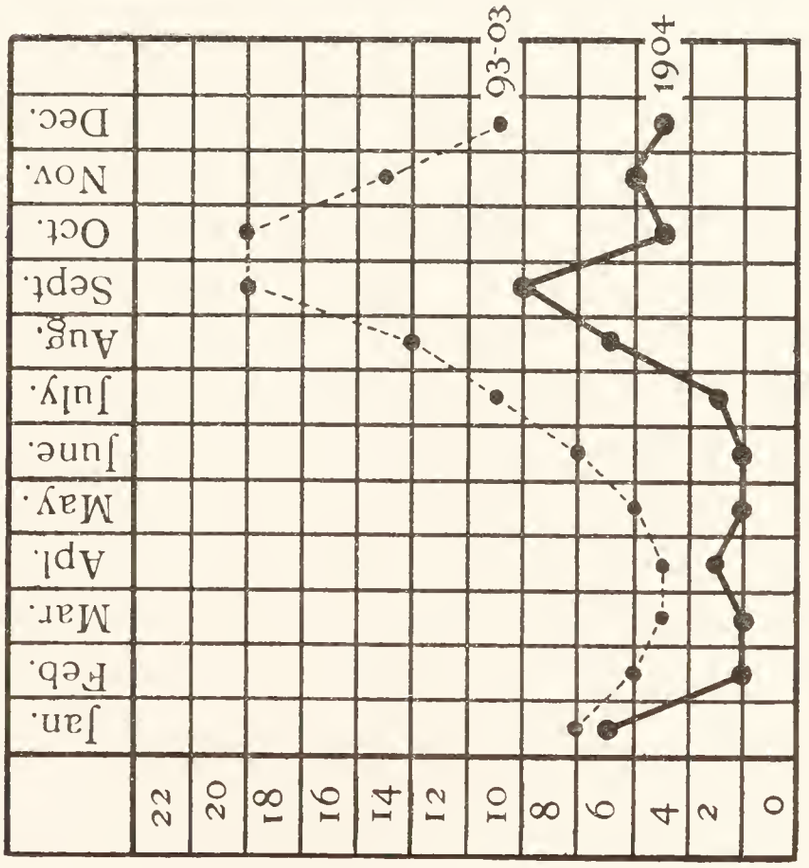
DISTRICTS.	Typhoid and Continued Fevers.							Puerperal Fever.	
	No. of cases notified.	No. of deaths.	No. of cases removed to hospital.	Cases per 1,000 population.	Deaths per 1,000 population.	Deaths per 100 cases.	Percentage of cases removed to hospital.	No. of cases notified.	No. of deaths.
Urban.									
Barking	18	5	12	·68	·19	27·8	67	3	0
Braintree	1	0	0	·19	0	0	0	0	0
Brentwood ...	1	0	0	·16	0	0	0	0	0
Brightlingsea ...	3	0	0	·64	0	0	0	0	0
Buckhurst Hill ...	1	1	0	·20	·20	100	0	0	0
Burnham	0	0	0	0	0	—	—	0	0
Chelmsford ...	2	0	0	·15	0	0	0	0	0
Chingford	0	0	0	0	0	—	—	1	1
Clacton	0	0	0	0	0	—	—	0	0
Colchester ...	17	4	10	·43	·10	23·5	59	3	2
East Ham... ...	61	14	41	·52	·12	23·0	67	11	1
Epping	0	0	0	0	0	—	—	0	0
Frinton	0	0	0	0	0	—	—	0	0
Grays	17	1	15	1·11	·07	5·9	88	2	1
Halstead	0	0	0	0	0	—	—	0	1
Harwich	10	2	6	·95	·19	20·0	60	1	0
Ilford	32	4	7	·54	·07	12·5	22	4	4
Leigh-on-Sea ...	6	1	0	1·26	·21	16·7	0	0	0
Leyton	51	10	23	·49	·10	19·6	45	7	1
Loughton	1	0	?	·20	0	0	?	0	0
Maldon	3	1	1	·53	·18	33·3	33	0	0
Romford	4	3	4	·27	·20	75·0	100	1	1
Saffron Walden ..	0	0	0	0	0	—	—	0	0
Shoeburyness ...	14	1	0	3·24	·23	7·1	0	0	0
Southend-on-Sea...	18	2	14	·43	·05	11·1	78	0	0
Waltham Holy Cross	0	0	0	0	0	—	—	0	0
Walthamstow ...	56	10	32	·53	·09	17·9	57	10	0
Walton-on-the-Naze	1	0	0	·48	0	0	0	0	0
Wanstead	1	0	0	·10	0	0	0	0	0
Witham	5	1	0	1·42	·28	20·0	0	0	0
Wivenhoe	0	0	0	0	0	—	—	0	0
Woodford	9	2	3	·61	·14	22·2	33	0	0
Totals ...	332	62		·50	·09	18·7	51*	43	12
Rural.									
Belchamp ...	1	1	0	·21	·21	100	0	1	1
Billericay ...	7	0	2	·40	0	0	29	1	0
Braintree ...	5	1	1	·28	·06	20	20	0	0
Bumpstead ...	0	0	0	0	0	—	—	0	0
Chelmsford ...	5	1	0	·21	·04	20	0	0	0
Dunmow ...	6	0	0	·39	0	0	0	0	0
Epping	1	1	0	·08	·08	100	0	1	0
Halstead, 1 ...	0	0	0	0	0	—	—	0	0
Halstead, 2 .	0	0	0	0	0	—	—	0	0
Lexden & Winstree	2	0	0	·10	0	0	0	1	0
Maldon	19	0	2	1·29	0	0	11	0	0
Ongar	4	1	0	·40	·10	25	0	1	1
Orsett	9	2	5	·41	·09	22	56	1	0
Rochford ...	36	7	?	2·30	·45	19	?	0	2
Romford ...	12	0	4	·59	0	0	33	2	0
Saffron Walden ...	6	0	2	·59	0	0	33	0	0
Stansted ...	1	1	0	·15	·15	100	0	0	0
Tendring ...	7	1	1	·33	·05	14	14	0	0
Totals... ...	121	16		49·	·07	13·2	20*	8	4

*Excluding districts which do not state number of cases removed.

TYPHOID AND ALLIED FEVERS.

URBAN DISTRICTS.

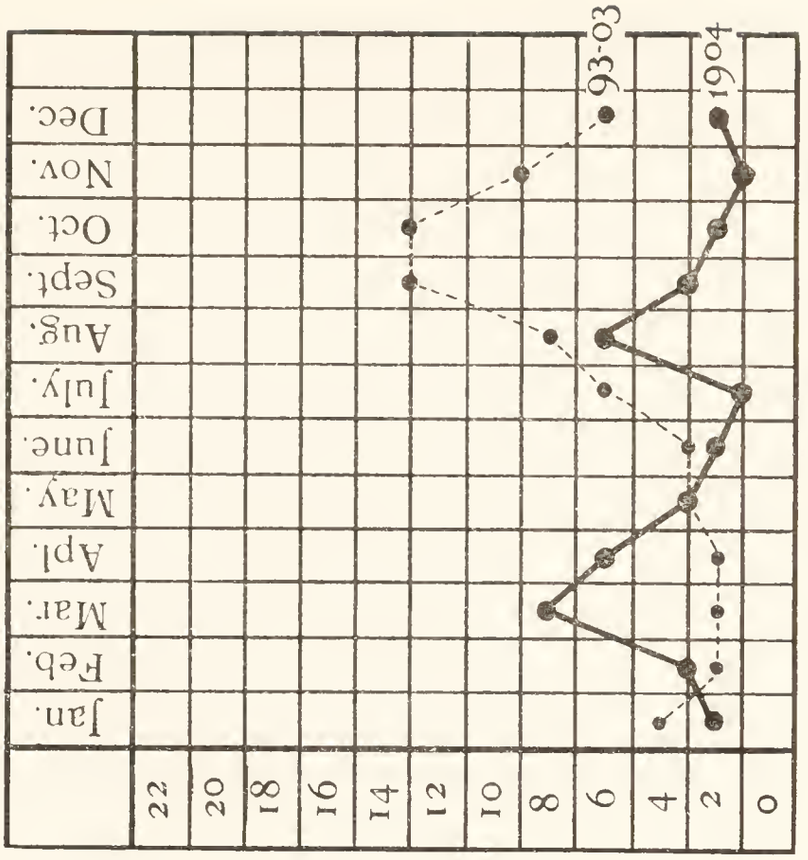
CASES PER 100,000 POPULATION.



TYPHOID AND ALLIED FEVERS.

RURAL DISTRICTS

CASES PER 100,000 POPULATION.



In the whole of the remainder of the County there were 262 cases and 45 deaths. The resulting rates compare as follows :—

	Case-rate.	Death-rate.
Thames Valley ...	·71 ...	·12
Other parts of County	·41 ...	·07

The excess in the rates for the Thames Valley shown in the above figures, though considerable, is much less than formerly. This improvement is largely the result of a remarkable reduction, both in cases and deaths, at Southend, which the local Medical Officer of Health attributes entirely to the precautions now taken there against the consumption of infected shell-fish. Whether this be so or not, and there is much to be said in favour of the hypothesis, the change that has occurred is startling, namely, a decline from a case-rate of 3·3 in 1902 to ·43 (less than that of the whole County) in 1904. It remains to be seen whether this improvement can be maintained, and whether the neighbouring districts, by adopting similar measures regarding shell-fish, can effect a similar reduction in the Typhoid Fever rates.

Twelve districts remained free from the disease throughout the year, and 25 record no deaths. The highest case-rates are furnished by Shoeburyness (3·24) and Rochford (2·30), while Rochford also furnishes much the highest death-rate (·45). The highest fatality amongst districts where ten or more cases occurred is recorded at Barking (27·8), Colchester (23·5) and East Ham (23·0) coming next, while Maldon and Romford Rural Districts record 19 and 12 cases respectively without a death. The fatality in the Rural Districts generally is, indeed, much lower than in the Urban, and that in spite of the fact that the Urban Districts isolated 51 per cent. of their cases and the Rural only 20 per cent. of theirs. In the past the advantage in respect of fatality has been held by the Urban Districts.

Reference to the charts of seasonal prevalence shows that in the Urban Districts the cases were each month below, and generally very far below, the average of the previous eleven years. The chart for the Rural Districts shows that in 1904

the prevalence during March and April was considerably above the average. This fact is largely due to the prevalence of the disease in Rochford about this period, 9 of the 36 Rochford cases occurring in April, although as a rule Typhoid Fever, as the charts demonstrate, is least prevalent in spring. On the whole the charts illustrate in a striking manner the great decrease, more marked in the Urban than in the Rural Districts, in the prevalence of Typhoid Fever.

Cases are attributed in one or other of the reports to most of the articles of diet to which suspicion in this regard has lately been attached, namely, shell-fish, fried fish, watercress, and ice cream. The number attributed to shell fish is less than last year.

Barking. The cases, as last year, have been few but fatal. Strict investigations as to origin have been made in all cases, with, generally, negative results.

Colchester. Of the 17 cases three were probably, and a fourth possibly, due to shell-fish. One was apparently due to the consumption of infected fried fish. No evidence was obtained connecting Colchester Byfleet oysters with Enteric Fever.

Two of the 17 cases were not really Typhoid Fever, but were cases of a comparatively rare and recently discovered isease, Paratyphoid Fever. It was possible to recognise this act only by bacteriological means, as in their symptoms the two diseases are (or may be) indistinguishable. Such cases are caused, not by the typhoid bacillus, but by a distinct microbe closely allied to or identical with the microbe causing many of the outbreaks of meat poisoning, and it is noteworthy that in one of these two cases the patient was a pork butcher.

East Ham. Here, as in Barking, the number of cases was small, but the fatality high. The fatality amongst cases removed to the Borough Hospital was 16 per cent. as against 36 per cent. amongst cases nursed at home.

Grays. Seven cases arose simultaneously in a School in July. During the absence of the local Medical Officer of

Health the outbreak was investigated by Dr. Thresh. In his opinion it was caused by some articles of food, but what this was could not be determined.

Ilford. As in 1903 there has been a marked absence of any history pointing to infection from eating shell-fish.

Leigh. As in Southend, a great fall has taken place in the number of cases notified, from 43 in 1902 to six in 1904. The case-rate is still, however, excessive. One of the six cases was infected by another of the series. Of the other five, two gave a history of eating shell fish.

Leyton. One case is attributed to ice cream, two to oysters, and six to contact with other cases.

Shoeburyness. In most of the 14 cases there was a history of shell fish consumption.

Southend. A large section of the report is devoted to this disease, especially in relation to shell fish. The great diminution in prevalence of the disease has already been dealt with. Of the 18 notifications, three proved incorrect and were withdrawn, and six were imported cases, so that only nine cases originated in the Borough. Of the 15 Typhoid cases eight were attributable to oysters and two to cockles. In only one case were the shell fish (oysters) obtained from a local vendor. Cockles are now cooked by subjection for 4-5 minutes to the action of live steam, and no cases have been traced to cockles so cooked. One of the remaining five cases is attributed to ice cream, and one was probably Paratyphoid.

Walthamstow. The case-rate is the lowest on record and the actual number of cases lower than in any year since 1892. The absence of rain in the summer and the consequent absence of organic matter in the drinking water no doubt exercised a favourable influence. The district is without proper hospital accommodation for Typhoid, and depends on the generosity of general hospitals.

Witham. One of the five cases was probably due to watercress.

Chelmsford R. Five cases occurred, all in one parish.

Four occurred simultaneously, three of them in one house, and were doubtless due to a common cause, which however could not be ascertained. The fifth case, which was quite unconnected with the others, gave a history of eating oysters three weeks before the onset of illness.

Maldon R. Most of the 19 cases occurred in Tollesbury, amongst families which were either related or on friendly terms. In March I concluded that the infection was being spread by unskilled nursing, and four nurses were engaged and placed in charge of the patients, as a serious epidemic was threatened. The result was in every way satisfactory. Every patient recovered and until October no fresh case occurred. The polluted and insufficient water supply appears to have a connection with the prevalence in Tollesbury. A case occurred in a patient who had eaten watercress from a roadside ditch.

Rochford. The number of cases, though excessive is considerably below that recorded last year. The decrease is attributed to improved water supply, the Western District supply being more and more used, and to the increased care taken as to cooking of shell fish before consumption.

Typhoid and Continued Fevers.

TABLE XXIV.

Ages of Persons attacked and Fatality at Different Ages.

	0-1	1-5	5-15	15-25	25-65	65 & upwards
Urban Districts—						
Cases notified	0	19	84	94	130	5
Percentage of total notifications		6	25	28	39	2
Deaths	0	3	8	23	27	1
Deaths per 100 notifications ...		15·8	9·5	24·5	20·8	20·0
Rural Districts—						
Cases notified	2	5	38	27	47	2
Percentage of total notifications	2	4	31	22	39	2
Deaths	0	1	2	2	10	1
Deaths per 100 notifications ...	0	20	5·3	7·4	21·3	50·0
Administrative County—						
Cases notified	2	24	122	121	177	7
Percentage of total notifications		5	27	27	39	2
Deaths	0	4	10	25	37	2
Deaths per 100 notifications ...	0	16·7	8·2	20·7	20·9	28·6

Measles and Whooping Cough.

TABLE XXV.

Deaths per 1,000 population.

	Measles.		Whooping Cough.	
	1904.	Mean for 14 years, 1890-1903.	1904.	Mean for 14 years 1890-1903.
Urban Districts	·305	·321	·265	·363
Rural Districts	·248	·126	·289	·268
Administrative County ...	·290	·256	·272	·335
England and Wales ...				

Measles appear to have been unusually prevalent during the past year. Many reports refer to extensive dissemination of the disease in the districts concerned, and of 60 school closures chronicled in the local reports 36 were on account of Measles. The other 24 closures were for Whooping Cough (8), Scarlet Fever (7), Diphtheria (3), Mumps (2), Influenza (1), Varicella (1), Influenza and Whooping Cough (1), and cause not stated (1). Many instances of spread by schools are quoted.

Barking. Scholars in the upper schools are allowed to attend whilst measles is in the house, the only provision being that the affected children should be in a room by themselves. Not one case has occurred in any of the schools by permitting this.

Colchester. A system of school notification of Whooping Cough, Measles, Chicken-pox and Mumps came into force on March 1st. The Head Teachers notify all suspected cases upon printed forms supplied. Leaflets regarding Measles and Whooping Cough are now being circulated.

East Ham. The School Attendance Officers and Head Teachers forward particulars of all children detained from school in consequence of Measles, and during the year the Medical Officer of Health has been informed of some 1,260 cases.

Ilford. Measles ceased to be notifiable in May, school notification being retained. The cases brought to light were far more numerous than in any year while compulsory notification was in force. The information so received is less prompt and less complete than when both forms of notification were made use of, but Dr. Stovin thinks the money saved can be better employed in other directions.

Southend. The death-rates from both Measles and Whooping Cough have fallen greatly of late years, owing, in Dr. Nash's opinion, to the distribution of pamphlets and other precautionary measures taken.

Walthamstow. Both diseases were prevalent throughout the year, and leaflets regarding both were distributed. A lady health visitor has since been appointed to carry out this and other duties. All children from infected houses are excluded from School.

Waltham Holy Cross. Here Measles is notifiable, but in the investigation of a school outbreak in December, 32 un-notified cases were discovered. Sunday school attendance has on several occasions frustrated the object of Day School closure.

Chelmsford R. Compulsory notification of the earliest case of any of the minor infectious diseases is advocated; and the pernicious effect of the present system of school grants is pointed out, grant being lost if individual scholars are excluded, but not if the school is closed, so that it pays best to allow disease to spread rapidly and have the school closed.

Maldon R. Whooping Cough caused three and Measles four deaths, all the other infectious diseases only causing one.

Stansted. A very severe epidemic of Measles caused 13 deaths, including 7 at Birchanger and 3 at Farnham. There had been no epidemic for many years and consequently the disease was not confined to the younger children.

Diarrhœa.

The following table illustrates forcibly the effect of a hot dry summer upon the diarrhœa death-rate. The summers of 1902 and 1903 were cold and wet, and the diarrhœa death-rate from

the County went down from ·82 in 1901 to ·28 in 1902 and ·33 in 1903. Last summer was hot and dry, and Diarrhœa was very fatal, especially in August.

TABLE XXVI.

Deaths from Diarrhœa per 1,000 population.

	1904.	1903.	13 years, 1890-1902.
Urban Districts	1·375	·40	·80
Rural Districts	·50	·14	·37
Administrative County ...	1·14	·33	·60
England and Wales ...		·55	·72

The Medical Officers of Health of Barking and Colchester record the results of enquiry into the feeding of infants dying from diarrhœa. In both cases these confirm the general conclusion that hand feeding has a preponderating influence in the causation of the disease. At Colchester inquiry was made into the method of feeding a number of healthy children as well, in houses of similar type, with the result that the percentage of the breast-fed amongst the healthy infants was found to be 74, and amongst infants dying of diarrhœa only 10. More of the latter were fed on condensed than on fresh cows milk.

The difficulty of diagnosing between epidemic diarrhœa and a certatn type of Influenza is referred to in the reports for Maldon Rural (where an outbreak of the kind occurred in January) and Wanstead.

The number of cases of epidemic diarrhœa which has occurred, it is impossible to estimate, as the disease is not notifiable, and all our information is therefore derived from the death returns. Some reference to the effect of the excessive mortality has already been made on pages 17 and 18 when discussing the deaths of infants. About one-third of the infants dying during the year succumbed to this malady, and it is undoubtedly a preventable disease. The so-called insanitary

conditions, no doubt, are in some degree responsible for the disease, but it is chiefly due to the ignorance of mothers, and consequent improper feeding. In hot seasons milk, swarming with bacteria as supplied to the homes, rapidly undergoes change. The bacteria multiply at an extraordinary rate, and the milk speedily becomes sour. It is probable, however, that it is not the mere souring of the milk which causes the disease, though this alone may cause gastric irritation, but the presence, in hourly increasing numbers, of bacteria derived from the excrement of cows.

The importance of a study of the causation and prevention of this disease will be rendered evident from a glance of the following table :—

Deaths Registered during the Year.

From Small-pox, Scarlet Fever, Diphtheria, and Typhoid Fever	206
From Measles and Whooping Cough ...	511
,, Diarrhœa	1040
Cancer	646
Consumption of the Lungs (Phthisis) ...	846
,, of other organs	386
All Tubercular Diseases...	1232

Out of 12,101 deaths in the County, Cancer is responsible for 646, or about 5·3 per cent., Diarrhœa for 1,040, or 8·6 per cent., Tubercular Diseases for 1232, or 10·2 per cent., Measles and Whooping Cough for 511, or 4·2 per cent., and Small-pox, Diphtheria and Croup, Scarlet Fever and Typhoid Fever for only 206, or 1·7 per cent. If we reflect upon the amount of attention given to the last mentioned group, and compare it with that given to the other groups, the conclusion is forced upon us that the former are not receiving nearly the amount of attention they deserve, and which in the interest of the community they ought to receive.

TABLE XXVII.

Meteorological Data and Prevalence of Infectious Diseases
For the Year ending December 31st, 1904.

Month.	Meteorological Data.					Infectious Diseases Notified.					Total.
	Mean Temperature.	Mean Daily Range.	Relative Humidity	No. of Rainy Days.	Rainfall.	Small-pox.	Diphtheria and Croup.	Fevers.	Scarlet Fever.	Erysipelas.	
January... ...	37·7	10·8	93	19	1·895	0	172	56	211	61	500
February ...	38·6	10·4	86	18	2·470	2	171	24	212	72	481
March	39·7	14·9	94	15	1·695	11	192	36	198	64	501
April	48·7	17·7	73	7	·565	26	125	38	233	60	482
May	52·8	16·6	76	14	1·370	11	130	25	250	44	460
June	56·8	20·6	68	6	·96	35	153	22	214	45	469
July	64·4	22·8	65	7	1·57	17	122	27	249	65	480
August	60·6	22·2	66·5	7	1·36	2	92	62	278	61	495
September ...	53·9	19·8	77	10	·82	0	137	75	379	57	648
October	49·4	16·3	83	15	1·11	1	160	44	487	86	778
November ...	41·2	13·9	89	12	1·36	0	190	46	426	90	752
December ...	38·8	11·1	91	17	1·645	0	136	43	338	89	606
Means & Totals	48·55	16·4	80	147	16·82	105	1780	498	3475	794	6652

Rainfall for Year in Different Districts.

Billericay	18·9
Barking ...	18·2
Buckhurst Hill	15·5
Chelmsford	16·8
Clacton ...	15·65
Colchester	16·1
Epping ...	19·0
Frinton ...	15·5
Halstead	16·85
Ilford ...	17·8
Lexden ...	18·4
Leyton ...	17·5
Southend	18·8
Saffron Walden	20·95
Waltham Abbey	20·9
Average	17·8

SECTION III.

SANITARY ADMINISTRATION.

In previous reports special reference has been made to Overcrowding, the Housing of the Working Classes and Systems of Sewage disposal, and quite recently a special report has been issued on the water supplies throughout the County. I propose therefore only to refer to a few of the recent changes chronicled in the annual reports, especially as these matters are referred to in the abstracts of the reports.

Systems of Sewage Disposal, River Pollution, etc.

Barking. East Ham, Ilford, Wanstead, Woodford, Buckhurst Hill, Chigwell, Loughton, Abridge and Ongar, all have sewage works on the banks of the river Roding. Although the condition of the river has not been so bad as in the previous years, many complaints have arisen as to its condition. Most complaints arise at Barking, where the river is tidal and where, not being a "stream" under the Rivers Pollution (Prevention) Act, the County Council has no jurisdiction. Polluting matters come both up and down the river and Barking suffers from the admixture. The Barking and East Ham effluents, being obtained by chemical process, are not so pure as those from the districts above where bacterial systems have been adopted but are usually much better than that from the London County Council outfall and are not, in themselves, sufficient to explain the nuisance complained of.

The Ilford sewage works are far from being completed, but the whole of the effluent is carried by an outfall sewer into the Thames below Barking Creek. It is not therefore likely to effect the condition of the Roding. The Woodford works were not complete at the end of the year, but have been completed since, and as yet have not turned out quite so good an effluent

as could have been expected. The Loughton works also, from time to time, produce an unsatisfactory effluent, the filter beds are small and the area of land for final treatment insufficient.

Braintree. A septic tank of 50,000 galls. capacity has been constructed and an additional three acres of land underdrained to receive the sewage.

Brentwood. The works here are not giving satisfactory results, causing pollution of the Ingreborne. Rain water is admitted into the sewers in certain parts of the system and not in others, the Medical Officer of Health thinks it will be better to exclude it in all parts.

Chelmsford. The sewers require more adequate ventilation. No alteration is chronicled at the sewage farm.

Clacton. The sewer outfall requires altering to admit of storm water getting away more quickly.

Epping. It has been decided to connect up certain of the outfall sewers and treat the sewage on biological lines.

Frinton. Several new roads have been sewered, and the existing sewers more effectually ventilated by means of lofty columns.

Halstead. The main sewer here has a tendency to silt up, and the lower part of the sewage farm is not in a satisfactory condition.

Harwich. The sewage of Upper Dovercourt has not yet been undertaken and the sewage is still discharged into dead wells. The sewers have been more effectually ventilated by the use of tall shafts.

Maldon. The crude sewage discharges into the tidal Blackwater. As the river is becoming very popular for boating, some system of treatment is desirable to prevent nuisances arising.

Saffron Walden. The new system of sewers, etc. has not been commenced, some alterations in the scheme having been found desirable.

Waltham Holy Cross. The works are said to give a high degree of purification, but it has been proposed to construct secondary contact beds to effect further improvement in the purity of the effluent.

Walthamstow. The Urban District Council has again been prosecuted by the Lea Conservancy Board for polluting the Dagenham Brook, with reference to which the Medical Officer of Health says:—

> Your willingness to adopt any scheme that would deal adequately with this serious problem, and your acceptance of the scheme of the Lea Conservancy Board, makes that body's action unintelligible.
>
> In November the Clerk was instructed to report as to the advisability of applying to the Local Government Board for a Provisional Order for the formation of a united district among the neighbouring authorities for the disposal of sewage, and in December the West Ham Corporation and Hackney Borough Council were invited to join the Council in their interview with the Board upon this difficult question.
>
> No scheme of sewage disposal, short of taking the sewage out of the district, will suffice for more than a few years except at a ruinous cost to a poor district like yours, and entire removal can only be a matter of time. Meantime every effort should be made with the means at your disposal, and no new scheme should be embarked upon without a probable certainty that the result will justify the expenditure.

Billericay R. The sewage works for South Weald are practically completed and the sewage from the County Asylum will shortly be diverted from the Brentwood system into that of South Weald. The work comprises a tank of 49,000 galls. capacity, six coke beds and two and half acres of specially prepared land. A scheme for sewering the town of Billericay is being prepared, but the scheme decided upon for Wickford has not been commenced.

Lexden and Winstree. Dr. Cook remarks that several parishes need sewers and that in his opinion it would be cheaper to provide them than to "alter and tinker" the present ones.

Romford R. The soil at Dagenham is sewage sodden. The village requires sewers. The Upminster sewage works give rise, so it is alleged, to an effluvium nuisance.

Stansted. The Liernur system adopted here has not proved perfectly satisfactory and the Council has decided upon a longer trial before taking over the sewers.

Tendring. The Medical Officer of Health refers to Mistley, Manningtree and Lawford, and to Thorpe and Little Clacton as requiring new sewers.

Other Subjects Mentioned in the Annual Reports.

Barking. The Council has not yet been able to arrange with the South Essex Water Co. for a supply of water to the houses at Creeksmouth. The cottage rents are said to be falling, yet the Council contemplate erecting 72 more cottages of four rooms to let at 5/- and 5/6 per week.

Chelmsford. The new boring has been completed. A large reservoir is being constructed at Longstumps.

Clacton. The Isolation Hospital has been enlarged by the addition of a new block for ten beds.

East Ham. A refuse destructor has been provided. The steam generated is utilized for pumping the sewage. Seven acres of land has been laid out in allotments. The Medical Officer of Health thinks that the five public parks and the swimming bath are an important "factor in the East Ham low death-rate." The building bye-laws have been altered, increasing their stringency.

Grays. A prosecution was successfully undertaken against a person for unloading manure too near the houses. The result has been that the unloading of such filth takes place elsewhere. New regulations have been adopted to secure that milk be properly stored in shops. Offensive matters from

Fishmongers and similar premises is now taken to the dust destructor and burnt.

Ilford. An Act of Parliament obtained recently confers many additional Sanitary Powers upon the Council, and the Medical Officer of Health has visited many of the farms outside the district from which milk is sent to Ilford. A code of regulations has been adopted, and one farmer who, apparantly would not comply therewith has been prohibited from sending milk to the town.

Leigh. Tho water supply continues to give trouble, but by an inspection of the fittings and consequent improvements the amount of water supplied has been reduced from 20 galls. to 13 galls. per person daily. A new bored well with duplicate machinery has been recommended by the Engineer consulted.

Leyton. Although plans have been prepared for a new Isolation Hospital the erection has not yet been commenced. Leyton has also obtained a local Act giving increased sanitary power, chiefly in connection with the supply of milk, making and storing ice cream and dealing with infectious diseases.

Southend. The Borough Council has at length decided to provided a dust destructor. . The estimated cost is £10,000. The Isolation Hospital is to be enlarged. During the summer the demand for water was 50 per cent. higher than in the previous year. To meet this unprecedented demand taxed the Water Co. to the utmost, but they succeeded, though at times the water was turbid from the presence of a little exceedingly fine sand.

Wanstead. Notwithstanding the increased accommodation recently provided at the Isolation Hospital, all the Woodford cases could not be received. The present arrangement will terminate in March of this year.

Dunmow R. The Council after obtaining the consent of the Local Government Board for a scheme for supplying Felsted with water has refused to carry it out, and matters at present are at a dead-lock.

Reference to factories, workshops, bakehouses, slaughter-houses and other places under the control of the Sanitary Authorities are referred to in the epitomes of the Medical Officer of Health's reports. The subject of Dairies and Milk supply will receive special attention in next year's report.

Inspectors' Reports.

Some Inspectors furnish interesting reports, others either do not report or their reports are not referred to by the Medical Officers.

The subjoined Tables summarise the Reports received.

TABLE XXVIII.

URBAN DISTRICTS.

SUMMARY OF REPORTS BY SANITARY INSPECTORS.

	Barking.	Braintree.	Brentwood	Brightlingsea.	Buckhurst Hill.	Burnham.	Chelmsford.	Chingford.	Clacton.	Colchester.	East Ham	Epping.	Frinton.	Grays.	Halstead.	Harwich.	Ilford.	Leigh-on-Sea.	Leyton.	Loughton.	Maldon.	Romford.	Saffron Walden	Shoeburyness.	Southend-on-Sea.	Waltham Holy Cross.	Walthamstow.	Walton-on-the-Naze.	Wanstead.	Witham.	Wivenhoe.	Woodford.
1. Complaints received ...	117	...	35	7	31	33	48	27	3	550	...	21		67			...	20		26	2		12	10	125	15	228	74	32		3	42
2. Nuisances detected ...	774	...	461	97	38	159	1003	36	152	..	...	50		...			...	72		22	52		39	30	654	661	1716	17	15		24	363
3. Nuisances abated ...	...	...	485	122	38	189	941	63	148	544	3375	49		480			...	92		47	53		51	40	663	737	2032	91			26	404
4. Notices served ...	835	...	101	11	5	53	403	41	96	452	1581	49		307			...	8		7	54		31	40	446	25	38	10	32		12	154
5. Summonses taken out ...	...	...	0	...	2	...	0	1	...	2	...	0		1			...	...		..	...		0	1	0	1	3	0	0		0	1
6. Convictions ...	...	...	0	...	1	...	0	1	...	1	...	0		1			...	...		..	...		0	0	0	1	3	0	...		0	1
7. Premises inspected ...	2077	...	475	413	...	240	421	250	639	3017	..	142		969			...	...		31	380		77	11	2177	227	3845	80	...		320	547
8. Lodging-houses inspected ...	4	...	1	...	...	...	2	...	...	1	...	...		2			...	...		...	...		0	0	0	3	...	42	...		0	...
9. Slaughter-houses inspected ...	4	8	8	9	*a*54	4	8	2	14	*a*251	...	4		7			4	3		3	4		5	0	137	13	12	2	2		1	43
10. Bake-houses inspected	16	10	9	13	*a*42	6	20	2	12	*a*165	...	5		13			32	7		5	10		...	3	360	20	51	3	3		4	41
11. Dairies and Milk Shops inspected ...	31	...	3	6	*a*101	4	24	11	13	82	...	4		25			42	8		5	8		16	3	592	20	102	4	7		5	38
12. Cowsheds inspected ...	4	...	2			1	8	13	13	59	...	4		3			7	5		6	8		14	2	61	39	15	2	7		3	30
13. Workshops inspected...	68	21	...	...	*a*92	11	80	6	95	64	...	18		72			261	..		27	..		...	7	95	30	147	4	3		3	125
14. Filthy houses cleansed, sec. 46, Public Health Act, 1875 ...	...	...	1	...	...	..	11	...	...	0	...	0		16			...	...		...	...		...	0	4	16	1039	0	...		0	...
15. Houses disinfected ...	288	...	28	..	6	7	31	6	78	619	...	1		101			...	9		4	23		21	3	350	9	841	7	23		19	58
16. Overcrowding abated...	19	...	1	...	...	2	9	1	...	8	17	0		2			4	...		3	...		...	1	0	0	14	1	...		1	...
17. Houses placed in habitable repair ...	...	...	...	...	...	15	7	2	3	7	...	24		...			6	...		...	...		...	0	4	21	...	7	...		4	...
18. Houses closed ...	...	...	0	3	..	...	2	...	...	4	...	0		...			...	..		...	...		...	0	7	8	...	0	...		2	...
19. Houses erected or re-built for which Water "Certificates" were applied for ...	...	...	...	14	..	...	...	...	...	0	...	...		...			...	...		23	...		...	25	...	41	...	...	...		2	...

a Number of inspections.

34. Name of Inspector ...	H. Wood		J. E. Fothergill	H. W. Chaplin	H. Tooley, A.R.I.B.A.	F. T. Back	W. K. Baker	J. T. Griffin	— Shadick	T. Wells	J. G. Banks	G. H. Pegram	W. G. Marshall	F. W. King		S. T. Bocock		T. R. Swales	James Alp	W. Whur	A. J. Meeson	W. W. West		Andrew Duan	R. H. Barrell	W. S. Mills
20. "Certificates" granted	...	...	...	14	...	...	...	..	...	0	...	...	...	...	...	20	.	...	25	...	41	...	...	...	2	...
21. ,, deferred	...	...	...	...	...	...	...	...	...	0	...	...	...	..	...	...	...	...	...	...	0	..	...	...	0	...
22. Wells sunk or improved supplies of water afforded ...	...	...	0	...	...	...	...	...	...	1	...	0	...	...	...	...	...	...	...	2	1	...	0	...	0	...
23 Wells cleansed or repaired ...	...	...	0	...	...	...	...	...	1	2	...	0	...	...	...	...	...	...	...	0	1	...	0	...	0	...
24. Wells closed ..	...	...	0	...	...	...	...	2	3	0	...	0	...	2	...	...	...	1	...	0	3	...	2	...	0	...
25. Houses connected with sewers ...	...	...	47	10	...	...	...	28	67	4	...	33	...	30	3	21	26	..	681	824	39	...	28	...	0	2
26. Houses connected with water mains ...	...	...	39	10	...	..	...	1	70	3	...	16	...	...	...	...	14	15	711	851	54	...	31	...	61	...
27. Earth, pail or improved Privies constructed, or existing Privies altered	...	...	0	...	9 }	13	...	2	...	6	...	3	...	...	...	...	...	...	0	26	30	...	8	...	14	1
28. Privies and W.C.'s repaired; W.C.'s supplied with water	518	...	6	17		15	87	14	63	41	...	36	127	201	26	4	22	...	681	22	94	43	19	...	12	62
29. Cisterns cleansed, repaired or covered ...	125	...	...	...	2	...	63	...	4	2	...	22	26	152	..	1	...	...	0	1	35	11	4	...	0	40
30. Animals improperly kept removed ...	17	...	6	4	2	2	9	...	18	233	21	1	10	...	...	58	...	...	0	9	2	12	51	...	0	12
31. Samples of water taken for analysis ...	19	...	0	...	...	...	6	...	16	15	..	0	2	...	..	...	...	1	0	4	5	20	1	...	9	...
32. Compensation paid for destruction of infected bedding ...	10/-	...	0	...	...	...	£23/1/9	£1/7/0	...	0	...	0	...	...	..	...	...	...	20/-	0	0	...	0	...	0	...
33. Seizures of unsound meat, etc. ...	...	...	0	...	...	...	0	..	2	1	3	0	5	.	...	...	...	...	0	20	0	22	1	...	0	...

TABLE XXIX.

RURAL DISTRICTS.

SUMMARY OF REPORTS BY SANITARY INSPECTORS.

		Belchamp.	Billericay West.	Billericay East.	Braintree.	Bumpstead.	Chelmsford.	Dunmow.	Epping.	Halstead No. 1.	Halstead No. 2.	Lexden and Winstree.	Maldon.	Ongar.	Orsett.	Rochford.	Romford, 1st div.	Romford, 2nd div.	Saffron Walden.	Stansted.	Tendring.
1.	Complaints received	17	37	10	27	6	18	14	38	2	25	20	16	...	55	39	...	50	13	4	35
2.	Nuisances detected	56	224	184	11	24	297	102	210	91	24	180	83	...	215	52	106	463	81	165	186
3.	Nuisances abated	56	190	175	37	30	295	91	190	81	35	171	56	...	270	91	106	462	94	140	157
4.	Notices served	24	105	57	20	29	315	95	235	74	24	47	75	..	168	91	106	250	78	30	28
5.	Summonses taken out	1	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	..	...	...	2
6.	Convictions	1	...	...	...	..	3	...	.	...	...	...	...	...	...	...	...	...	...	...	...
7.	Premises inspected	252	413	258	94	102	1950	497	190	340	97	1320	1000	...	433	115	...	800	328	340	743
8.	Lodging-houses inspected	...	0	0	...	...	..	1	...	...	...	...	...	...	...	3	...	1	...	...	...
9.	Slaughter-houses inspected	6	6	6	20	2	9	12	10	18	4	13	16	..	15	6	6	7	12	20*a*	14
10.	Bakehouses inspected	16	6	8	46	...	47	32	18	31	16	28	26	...	20	3	12	5	...	9	17
11.	Dairies and Milk Shops inspected	1	9	5	30	12	93	25	...	27	8	10	27	...	24	8	30	10	7	...	52
12.	Cowsheds inspected	1	22	13	60	15	93	30	39	27	10	30	29	...	25	17		19	18	20*a*	
13.	Workshops inspected	50	8	7	25	...	235	82	20	35	69	37	23	...	...	6	10	8	...	29*a*	...
14.	Filthy houses cleansed, sec. 46, Public Health Act, 1875	...	6	0	2	...	5	1	...	...	...	4	2	...	2	1	2	1	1	2	...
15.	Houses disinfected	2	20	3	44	...	33	35	68	1	26	50	53	...	69	41	...	221	14	6	45
16.	Overcrowding abated	2	1	3	2	...	7	3	2	1	..	3	6	...	1	2	4	2	...	1	...
17.	Houses placed in habitable repair	...	11	3	2	...	12	14	5	1	...	10	..	...	3	...	10	4	...	5	...
18.	Houses closed	3	0	1	...	...	...	4	...	...	...	...	...	...	1	3	...	10	...	...	...

a Number of inspections.

19.	Houses erected or re-built for which Water "Certificates" were applied for	6	12	70	17	4	37	15	40	...	13	...	...	...	149	89	...	...	...	9	48
20.	"Certificates" granted	6	9	15	16	1	29	5	40	...	7	15	...	22	149	86	...	...	3	4	47
21.	,, deferred	1	3	55	1	...	3	1	...	...	...	1	..	...	1	83	...	...	...	1	1
22.	Wells sunk or improved supplies of water afforded	4	1	6	6	...	...	6	17	2	7	22	1	...	2	1	...	...	..	...	3
23.	Wells cleansed or repaired	7	23	7	2	...	...	9	6	6	2	26	...	...	2	1	...	...	7	4	4
24.	Wells closed	1	0	0	1	...	...	...	1	1	...	1	...	...	1	3	...	1	...	1	3
25.	Houses connected with sewers	2	29	3	21	...	...	4	33	...	17	...	...	...	106	2	30	...	...	35	18
26.	Houses connected with water mains	...	7	20	...	...	...	...	...	...	...	134	9	...	291	353	...	...	..	...	43
27.	Earth, pail, or improved Privies constructed, or existing privies altered	4	22	31	10	...	45	7	37	10	7	48	12	...	18	5	...	9	...	10	23
28.	Privies and W.C.'s repaired; W.C.'s supplied with water...	20	12	25	3	...	57	8	20	43	6	35	1	...	70	...	5	9	...	...	37
29.	Cisterns cleansed, repaired, or covered	...	4	..	...	...	..	...	...	...	...	...	...	...	12	...	...	...	...	...	...
30.	Animals improperly kept removed	3	0	7	...	...	1	7	8	...	1	13	...	...	4	...	...	4	...	...	14
31.	Samples of water taken for analysis	10	12	6	2	3	56	25	..	3	6	11	23	...	6	28	7	12	9	6	52
32.	Compensation paid for destruction of infected bedding	...	...	...	...	...	...	...	...	...	...	...	...	...	£8/10/-	£2/10/-	...	...	...	..	...
33.	Seizures of unsound meat, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
34.	Name of Inspector	Sidney Allpress	S. J. Shelley	R. J. W. Layland	E. H. Bright	Thos. Hood	W. Edser	W. H. Carr	J. H. Bell	J. E. Bolt	W. H. Eade		E. J. Ennals	W. N. Jarvis	John Hurst		A. Cornell	G. T. Carter	A. E. Pitstow	E. F. Watts	

Chief Improvements Effected and Further Improvements Required.

From the Reports for the years 1900-1903 the "Improvements Required" have been tabulated, so far as they could be ascertained in each district, and the remarks placed opposite to each indicate the steps taken during the year to effect the improvements.

Urban District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
Barking	1900. Better system of sewage treatment.	No alteration made.
	1900. Improved ventilation of sewers and relaying of old sewers.	Much still to be done.
	1900. Refuse Destructor.	Not provided.
	1900. Sanitary tenements at low rentals for the poorest labouring class.	
	1902, Public Water supply for Creeksmouth and elsewhere.	Negotiations in progress as to Creeksmouth supply.
	1902. Public sanitary conveniences for both sexes.	Not provided.
	1903. Pavement of many courts and back yards.	Much still to be done.
	1904. Improvements at Hospital.	
Braintree	1904. Free treatment of all cases at Isolation Hospital.	
	1904. Increased Water Supply.	
Brentwood	1900. Improved flushing and ventilation of sewers.	
	1900. A public mortuary.	
	1900. An Ambulance.	
	1901. Revision of sewerage system.	Still required.
	1902. Flushing apparatus required in many w.c,'s.	Still required.
Brightlingsea	1901. More thorough flushiing of sewers.	Carried out in 1904.
	1902. Improvement in the method of drain testing.	No reference in 1904 report.
	1902. Regulations for Diaries, &c.	Adopted 1904.
	1902. Use of the powers given by the Food and Drugs Acts.	
Buckhurst Hill	1904. No mention of requirements.	No mention of improvements.
Burnham	1900. Flushing apparatus to w.c.'s.	
	1902. Storage reservoir for water of 200,000 galls. capacity.	Supply sufficient at present.
	1902. Isolation Hospital.	Cottage only provided.

Urban District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
CHELMSFORD	... 1900. New Joint Isolation Hospital.	No progress made in 1904.
	1900. Improved water supply.	In progress.
	1902. Veterinary Inspector to inspect cows in cowsheds.	Not yet appointed.
	1903. Refuse Destructor.	Nothing done.
	1903. Draining and sewering Bundicks Hill.	Plans submitted to L.G.B.
CHINGFORD	... 1904. No mention of requirements.	Considerable additions and improvements at sewage farm.
CLACTON	... 1901. Abolition of Ashpits.	
	1902. Refuse Destructor.	
	1904. Improved discharge for storm-water at eastern outfall.	
COLCHESTER	... 1904. None mentioned.	Increased hospital accommodation.
		New public well and pumping station.
		Improvements at Isolation Hospital.
		Steam disinfector provided.
		Voluntary notification of Phthisis.
		School notification of minor infectious diseases.
EAST HAM.	... 1900. Improvement of sewage works.	Recently carried out.
	1903. New Scarlet Fever Hospital.	No further progress made.
	Refuse Destructor.	About to be completed.
	New buildings bye-laws.	Submitted to L.G.B.
EPPING	... 1901. Flushing cisterns to w.c.'s.	A number provided, but many still required.
	1901. Fortnightly collection of house refuse.	Bi-weekly collection arranged.
	1901. More water.	
	1902. Better houses for labourers.	24 put in habitable repair.
	1902. Improved method of sewage disposal.	Scheme for bacterial treatment under consideration.
FRINTON	... 1904. No requirements mentioned.	Improved drainage
		Heightening of sewer ventilators.
GRAYS	... Improvements at sewage works.	Completed.
	1903. Steam disinfector.	
	1903. Paving of back roads.	Still required.
	1903. Cheap cottages with 3 bedrooms.	Do.
HALSTEAD	... 1904. Further improvements at sewage farm.	
	1904. Re-sewering of High Street, south side.	Several portions of sewer relaid.
		More manholes provided.
	1904. Refuse Destructor.	

Urban District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
HARWICH ...	1902. Extension of sewer in Upper Dovercourt.	
	1904. Improved ventilation of various sewers.	Two new shafts on high level sewer.
ILFORD ...	1900. Enlargement and reconstruction of sewage works.	In progress.
	1904. Refuse Destructor.	Under consideration.
		New powers under private act with regard to milk supply, soilpipe ventilators, dust bins and trade refuse.
LEIGH-ON-SEA ...	1900. Isolation Hospital.	Not provided.
	1903. Constant water supply.	Question still under discussion.
		Water pumping plant to be duplicated.
LEYTON ...	1901. Permanent Isolation Hospital.	Plans drawn by Surveyor.
	1901. More public sanitary conveniences.	No reference in 1904 report.
	1903. Pavement & drainage of roadways at rear of shops.	Still required.
LOUGHTON ...	1902. Insanitary cottages at Pump Hill.	Still in occupation.
	1902. More efficient sewage purification.	Still required.
	1903. Flushing apparatus for w.c.'s in old cottages.	Still required.
		Cleansing of Staples Road pond.
		Improved conditions of pig keeping and diminution in number of pigs.
MALDON ...	1900. Increased water supply.	Still inadequate.
	1900. Better system of scavenging.	Still required.
	1903. Substitution of w.c.'s for dilapidated privies.	Being gradually effected.
	1904. Treatment of sewage before discharge.	
ROMFORD ...	1900. Making up new roads.	No mention of improvements or requirements in report.
SAFFRON WALDEN	1900. Improved sewerage and sewage disposal.	Arrangements in progress.
	1904. Water supply for Seward's End.	Scheme prepared.
SHOEBURYNESS ...		No improvements of importance.
SOUTHEND-ON-SEA	1900. Public Abattoir.	Still in abeyance.
	1900. Refuse Destructor.	Loan applied for.
	1902. Enlargement of Isolation Hospital.	Plans for extension prepared.
	1902. Treatment of sewage before its discharge into the sea.	No reference in 1904 report.
	1904. Bye-laws for offensive trades.	

Urban District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
WALTHAM HOLY CROSS	1900. Permanent Joint Isolation Hospital.	In course of erection.
	1903. Bye-laws to enforce pavement of yards.	
	1904. Improved water supplies at Marsh Hill, at Fisher's Green and elsewhere.	
	1904. Additional housing accommodation.	Building scheme rejected.
	1904. Steam disinfector and ambulance.	
WALTHAMSTOW ...	1900. New sewage works.	No progress during 1904.
	1901. Refuse Destructor.	Provided.
	1902. Further Isolation Hospital accommodation.	Being erected.
	1903. Separate vans for infected and disinfected articles.	Provided.
	1903. More public conveniences.	Still required.
	1904. Paving of passages at rear of premises.	
	1904. Infants milk depot.	
WALTON ON THE NAZE	1900. Isolation Hospital accommodation.	Arrangement with a neighbouring authority in contemplation.
	1903. Carrying sewer outfall further out to sea.	No reference in 1904 report.
	1904. Bye-laws for houses let in lodgings.	Improved ventilation of septic tank.
WANSTEAD ...	1901. Ventilating shafts for sewers.	No reference in 1904 report.
WITHAM ...	1900. Isolation Hospital.	Not yet commenced.
WIVENHOE ...	1900. Isolation Hospital.	Not yet provided.
	1903. System of sewers.	Not yet provided.
WOODFORD ...	1900. Filling up old ponds.	One filled up in 1904.
	1900. Improvement of Eastern sewage works.	Completed.
	1903. Alteration and extension of Eastern sewage system.	Approaching completion.
	1903. Isolation Hospital.	L.G.B. enquiry held.
Rural District.		
BECHAMP ...	1901. Isolation Hospital.	Not yet provided.
		New public well at Gestingthorpe.
BILLERICAY ...	1900. Sewage system for Billericay.	Provisional order applied for.
	1900, Sewage system for Wickford.	Contract accepted
	1904. Water supply for Wickford.	Scheme awaits L.G.B. sanction.
	1904. Water supply at Pilgrim's Hatch and Bentley.	
	1904. Less stringent building bye-laws.	Awaiting L.G.B. sanction.

Rural District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
BILLERICAY	... 1904. Regulations under C.D.M. Order.	Sewerage of Warley Peninsula and Brook Street.
		Extension of sewer at Priest's Lane.
		Deep well at Slyce's Gate.
		Water supply for North Benfleet.
BRAINTREE	... 1900. Building Bye-laws.	No reference in 1904 report.
	1904. Public water supply at Bocking,	(Joint) Small-pox Hospital built.
		Trapped road gullies provided.
BUMPSTEAD	... 1903. Provision of a new sewer with proper outfall at Steeple Bumpstead.	Not yet provided.
CHELMSFORD	... 1900. Sewerage and water supply for Writtle.	Progressing slowly.
	1900. Enlargement of Isolation Hospital.	Additional ward block to be erected.
	1904. High pressure water supply at Springfield Hill.	In hand.
	1904. Pure water supply for Ingatestone.	Progressing slowly.
	1904. Water suppy for Stock.	
	1904. Better water supply to many dairy farms.	
	1904. Better cottages in some parishes.	New plant, &c. at Great Baddow water works.
		Improved water supplies to North End and elsewhere.
		Attention to sewer ditches.
DUNMOW	... 1901. Isolation Hospital.	No reference in 1904 report.
	1902. Improved water supply at Felstead and elsewhere.	Nothing done, L.G.B. inquiry to be held.
	1903. Better sewage disposal at Dunmow.	Nothing done (?).
EPPING	... 1902. New ambulance.	No mention in 1904 report.
	1903. Improved drainage of parts of North Weald.	No mention in 1904 report.
	1904. Public sewerage of Potter Street and Roydon.	Plans prepared for Roydon.
	Better sewage disposal at Harlow.	
	1904. Systematic refuse collection at Chigwell.	
HLASTEAD I.	... 1900. Sewerage and improved water supply for Earl's Colne.	Report received from Dr. Thresh.
		No further progress recorded.
HALSTEAD II.	... 1903. Bye-laws for drainage and for keeping and slaughtering of animals.	
	1904. Bacterial tank and filter bed for Church Street, Sible Hedingham.	About to be constructed.

Rural District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
LEXDEN AND WINSTREE	1902. Sewerage of several villages.	
	1903. New water supply at Abberton.	Cost considered prohibitive.
	1903. Isolation Hospital.	Tents still relied on.
MALDON ...		Public water supply for Tolleshunt Knights.
	1900. Deep well at Tollesbury.	Nothing done.
	1901. Improvement of Goldhanger well.	Completed.
	1904. Improved water supply at Tillingham.	Nothing done.
	1904. Supervision of Southminster sewage outfalls.	
	1904. Improved housing for the working classes.	
ONGAR ...	1900. Isolation Hospital.	Still unprovided.
	1902. Disinfector.	No reference in 1904 report. (provided).
	1903. Drainage of Fyfield.	Nothing done.
	1904. Improved housing for the working classes.	
ORSETT ...		Water supply to Orsett and Corringham.
	1902. Drainage of West Thurrock and Aveley.	Scheme prepared for West Thurrock and South Stifford.
	1903. Water supply to Fobbing.	L.G.B. inquiry pending.
	1904. Water supply to Laindon Hills.	Spring enclosed and two good wells dug. Negotiations with water Companies in progress.
ROCHFORD ...	1900. Drainage of Rayleigh, Hadleigh, South Benfleet, Great Wakering and Rochford.	Still urgently required.
	1900, Water supply for Wakering.	Supply from Southend Co. suggested.
	1904. Improvements of Canewdon well.	Steps to be taken.
ROMFORD ...	1900. Sewerage of Dagenham.	Construction commenced.
	1903. Sewerage of Rainham.	Construction commenced.
SAFFRON WALDEN...	1902. Improved water supplies.	Seven public supplies repaired. New filter at Littlebury Green.
	1904. Sewerage system for Newport.	
STANSTED ...	None mentioned.	None mentioned.
TENDRING ...	1900. Sewerage of Manningtree, Mistley and Lawford.	
	1900. Sewerage of Thorpe and little Clacton.	L.G.B. inquiry to be held.

Rural District.	Improvements required.	Improvements chronicled in 1904 and Remarks.
TENDRING ...	1900. Better water supply at Beaumont, Weeley and Wix.	No reference in 1904 report.
	1900. Sewer at Great Holland.	No reference in 1904 report.
	1901. Water supply for St. Osyth.	
	1903. System of scavenging at Manningtree, Lawford and Mistley.	Contract made.
	1904. Water supply for Ardleigh.	Three new Abyssinian and one new bored well (localities not stated).

APPENDIX.

SUMMARY OF REPORTS OF MEDICAL OFFICERS OF HEALTH.

I. PORT SANITARY DISTRICTS.

COLCHESTER.

Medical Officer of Health—C. A. S. LING, M.R.C.S.

The report is in manuscript.

During the year 462 vessels entered the port, including 31 from abroad. No case of illness of any nature occurred. Various nuisances were detected on board four of the foreign craft. All these were remedied. The hospital is in good condition and prepared for any emergency.

HARWICH.

Medical Officer of Health—H. GURNEY, L.R.C.P., M.R.C.S.

The report is in manuscript.

The number of vessels entering the port during the year was 4,235—2,652 coastwise and 1,583 from foreign ports.

A steward employed on the G.E. Ry. *ss. Colchester* developed small-pox in May, after being two days ashore. The vessel was detained, and all cabins which might have been infected carefully disinfected, and other necessary steps taken. No spread of the disease occurred.

The hospital ship *Betsey* was used, by special permission of the Sanitary Committee, for the isolation of two cases of scarlet fever from *H.M.S. Fisgard*.

The Port Inspector has visited 508 vessels during the year. The sanitary defects met with were of a trivial nature and were promptly remedied.

MALDON.

Medical Officer of Health—H. R. BROWN, M.D.

Two reports have been presented this year, the Local Government Board having called for a second to supplement the first. Both are type-written.

The boundaries of the port sanitary district are defined, and its trade is stated to consist chiefly of hay, straw, grain, manure, coal, iron, and timber, carried on chiefly in barges.

During the year 1,148 vessels, with an aggregate tonnage of 51,260 tons, entered the port; of these only 25, with a tonnage of 3,369, were from foreign ports, being almost all timber ships from Scandinavia.

The lower part of the river is very difficult of access from Maldon, and systematic inspection of all vessels on entering by the Inspector of Nuisances from Maldon is quite impossible. All vessels are boarded by the Coastguards, acting as the Inspector's deputies, at Bradwell or Stangate coastguard stations; and all vessels coming to the upper reaches are visited by the Inspector personally.

During the year the total number of 1,148 vessels entering the port were inspected in this way, and 18 by the Medical Officer of Health, who usually inspects vessels from foreign ports, or from British ports where small-pox is prevalent.

No sanitary defects, no case of infectious illness, and no deaths on board ship have been reported during the year.

II. URBAN SANITARY DISTRICTS.

BARKING.

Medical Officer of Health—C. F. FENTON, L.R.C.P., M.R.C.S.

Area in acres, 1901 census (land and inland water) 3,803

Population, 1901 census	21,547
,, 1904 estimated ...	26,500
Deaths registered in the district ...	356
Corrections ... Additions ...	29
,, ... Deductions...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·5 ...	17·0
Zymotic Death-rate	3·7 ...	3·6
Infantile Mortality	144· ...	157·
Birth-rate	33·8 ...	39·5
Cases of Infectious Disease per 1,000 population ...	10·8 ...	11·0

The report is printed and includes a report prepared by the Inspector of Nuisances.

Physical Features, etc. The district is low-lying, its height above ordnance datum varying from about 6 to 30 feet. Flooding is, however, almost unknown. The subsoil is alluvial, the town being built upon a deep bed of gravel topped with varying depths of peat or loam. Beneath the gravel lies London clay, and at a depth of about 170 feet the chalk.

House Accommodation. Cottage rents are much lower than formerly. There are 1,368 houses letting at 5s. 6d. per week and under, and the number of these is still increasing. There is, however, a dearth of cheap houses with three bedrooms. The Council's houses erected in 1899 continue to let well at 6s. 9d. to 7s., and 72 new four-roomed cottages are now being built, which are to be let at a rent of 5s. to 5s. 6d. The condition of the older property is fully set forth in a table

giving, street by street, both improvements recently effected and improvements required.

Sewerage and Drainage. The whole of the district is not sewered at present, the rural portion being served by cesspools. These are leaky, and soon overflow, needing constant attention. The question how to deal properly with the undrained inhabited portion of the district is now receiving a good deal of attention. Sewage disposal remains as before (chemical precipitation).

House Refuse is removed by the Council. A weekly collection is aimed at, but not always carried out. The dust should be collected much oftener, especially in the poorer parts of the town.

Water Supply. This is in the main derived from the South Essex Company, the remainder of the district being supplied by shallow wells, and by a polluted deep well at Creeksmouth. The South Essex water contains, as formerly, excess of nitrates and chlorides, but no definite evidence of any deleterious effects is obtainable. There is now a prospect of Creeksmouth obtaining a public supply. The deep well water was analysed in July, and pronounced to be quite unfit and unsafe for use for domestic purposes. A list of shallow wells furnishing drinking water is given. They are all more or less impure. There are now 96 houses not connected with the main, as against 198 in 1900.

Supervised Premises. Slaughterhouses are frequently inspected. Three are old-fashioned registered premises, which just manage to comply with the bye-laws. The fourth is an up-to-date and excellently kept licensed slaughterhouse. A public abattoir would be of great advantage. A knacker's yard has recently been licensed. No nuisance has as yet been detected.

The milk supply has been a source of constant trouble. All the milkshops and dairies were visited by the Medical Officer of Health in August, and in most cases the milk was

found to be uncovered and dirty. An attempt is being made to remedy this.

There are four common lodginghouses, 89 beds in all. All have been periodically inspected, and found in satisfactory condition.

There is no licensed offensive trade in the district.

Factory and Workshop Act. The 85 workshops and workplaces have all been inspected. Six defects were found, and have been remedied. Six outworkers' names were received, and their premises inspected. There are 18 bakehouses in the district, none of them underground. All have been inspected by the Medical Officer of Health twice during the year. Several are somewhat deficient in light, one was found dirty and untidy, and one will have to be dealt with as unsuitable. With these exceptions all are in order.

Nuisances. The town has been systematically inspected from time to time during the year. 673 house-to-house inspections were made, and in no less than 529 of these houses sanitary defects were discovered. The main combined drains at the rear of houses were found choked in 72 instances.

The River Roding has been the cause of a good deal of complaint during the year. In August it was found in a most offensive condition. None of this pollution arose from Barking. The greater part appeared to originate higher up stream, but some of the pollution in Dr. Fenton's opinion, is carried up the creek from the London County Council northern outfall works.

Infectious Disease, etc. In all cases of infectious disease the premises are immediately visited and careful inquiries and inspection made. Where patients are nursed at home a printed form of directions is handed to the householder. After removal or recovery of the patient the bedding, &c., is removed for disinfection by steam and the rooms fumigated with formic aldehyde. Attendance officers, head teachers, and Sunday School superintendents are informed of all cases with which they are concerned. Pawnbrokers also are notified of all cases.

The Isolation Hospital is still without a suitable fence. The method of sewage disposal is exceedingly unsatisfactory, but the hospital will probably be connected with the general sewerage system during the year. A hot water supply and adequate warming arrangements for the Upper Hospital are needed very badly. The cottage at which the nurses are accommodated is scarcely habitable.

BRAINTREE.

Medical Officer of Health—PERCY R. STEVENS, L.R.C.P., M.R.C.S.

Area in acres, 1901 census (land and inland water) 2,224

Population, 1901 census 5,330

,, 1904 estimated 5,330

Deaths registered in the district ... 72

Corrections ... Additions ... 10

,, ... Deductions... 0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	15·4 ...	16·2
Zymotic Death-rate	1·5 ...	1·3
Infantile Mortality	83· ...	100·
Birth-rate	25·0 ...	22·8
Cases of Infectious Disease per 1,000 population ...	15·2 ...	4·3

The report is in manuscript.

Sewerage and Drainage. The sewer has been extended from South Street to drain a portion of the Fairfield estate, which has been sold for building purposes. At the sewage works an additional area of land, three acres in extent, has been laid out and underdrained, and a septic tank of about 50,000 gallons capacity constructed for the purpose of dealing with the night flow of sewage.

House Refuse. The "D" card system has been continued during the past year and found to answer satisfactorily.

Water Supply. This is derived from deep wells in the chalk. As the water level, and with it the yield, continue to fall, the Council is considering the question of fixing duplicate pumps at a lower level.

Supervised Premises. There are no common lodginghouses. The eight existing slaughterhouses have been inspected and found satisfactory. Application was made for a licence for a new slaughterhouse, but was refused, as the Council's requirements were not complied with.

Factory and Workshop Act. The workshops have all been inspected. Ten are bakehouses, and these have been found satisfactory.

Infectious Disease. Treatment at the Isolation Hospital is not gratuitous, except for necessitous cases, and objection was made during the year by a few parents to the hospital isolation of their children on the ground of expense. Free treatment of all cases is advocated.

BRENTWOOD.

Medical Officer of Health—S. FRAZER, L.R.C.P., L.R.C.S.

Area in acres, 1901 census (land and inland water) 460

Population, 1901 census	...	...	4,932
,, 1904 estimated	...	...	6,098
Deaths registered in the district		...	58
Corrections	...	Additions ...	10
,,	...	Deductions...	0

	1904.		Mean for 5 years, 1899—1903.
Nett Death-rate	11·2	...	11·1
Zymotic Death-rate	·5	...	·8
Infantile Mortality	78·	...	116·
Birth-rate	16·7	...	19·8
Cases of Infectious Disease per 1,000 population ...	6·4	...	3·2

The report is printed.

Dr. Fraser obtains a "corrected birth-rate" of 19·2 by deducting from the population the 950 children living at the Hackney Training, St. Charles, and Highwood Schools.

Physical Features, etc. This small urban district is situated on elevated ground on the London and Colchester main road. The adjoining portions of the contiguous parishes of South Weald and Shenfield, belonging to the Billericay Rural District, are of urban character and have been formed into a "Special Drainage District" and connected with the Brentwood system. Their inclusion in the Urban District is advocated. A small brook separating them from the Urban District, and discharging into the Ingrebourne brook, takes most of the surface drainage.

Brewing, brickmaking, and agricultural implement making are the principal industries. Many of the residents are employed in London.

House Accommodation. Cottages for the working classes are still in demand. The 29 completed by the Council last year have proved a decided success. The building bye-laws are well enforced.

Sewerage and Drainage. Sewage disposal is upon a farm managed by a Joint Committee of nine members, six representing Brentwood Urban and three Billericay Rural District Council. This body is practically independent of both Councils, and the resulting position is found to be anomalous and unsatisfactory. For instance, rain water from the roofs is admitted to the sewer in Brentwood, but strictly excluded in the Special Drainage District. Treatment at the works is partly by chemical precipitation and partly by means of bacteria beds. The working is said to be unsatisfactory.

Excrement Disposal. W.c.'s are in general use, but in about 80 per cent. of the cottage property are hand flushed, and are consequently found in a more or less filthy condition.

House Refuse. Weekly removal is carried out by public scavengers. Impervious ashbins are supplied at cost price by the Council.

Water Supply. This is provided by the South Essex Water Company, which has erected a water tower near Warley barracks in order to remedy the scarcity in the higher parts of the town.

Supervised Premises. The one common lodginghouse has been kept in a fairly satisfactory condition. The slaughterhouses are regularly inspected and, generally speaking, are kept clean.

Factory and Workshop Act. The seven workshops on the register were inspected and three nuisances detected and remedied. Generally speaking the workshops and bakehouses are fairly satisfactory. No lists of outworkers were received.

Infectious Disease. Disinfection of clothing, &c., is by means of a Thresh's portable disinfector, and of rooms by spraying.

There being no isolation hospital, cases are sent by arrangement to that of the Billericay Authority. The district is considered at present too small to maintain its own isolation hospital, but if extended it is thought that it could do so with advantage.

BRIGHTLINGSEA.

Medical Officer of Health—E. P. DICKIN, M.D., C.M.

Area in acres, 1901 census (land and inland water) 2,867

Population, 1901 census	4,501
,, 1904 estimated	4,702
Deaths registered in the district ...	52
Corrections ... Additions ..	8
,, ... Deductions...	0

	1904.	Mean for 7 years, 1897—1903.
Nett Death-rate	12·8 ...	13·4
Zymotic Death-rate	0· ...	1·0
Infantile Mortality	77· ...	101·
Birth-rate	22·1 ...	26·6
Cases of Infectious Disease per 1,000 population ...	1·7 ...	5·1

The report is printed.

Sewerage and Drainage. The sewage works have proved satisfactory throughout the year, and the sewers have been more thoroughly flushed than formerly.

House Refuse. The scavenging has been well done, but properly covered carts are desirable.

Water Supply. The supply from the public works is ample and of good quality.

Supervised Premises. The Dairies, Cowsheds, and Milkshops Order has been enforced for the first time during the year. Six dairies and cowsheds have been inspected, but their condition is not recorded.

Factory and Workshop Act. There are 64 workshops and laundries on the register, and 50 inspections of these have been made, 14 defects being found. The two half-yearly lists received contained the names of 116 outworkers, and 53 inspections of their premises have been made, no defects being revealed.

Isolation Hospital. The tent hospital provided has not been used during the year.

BUCKHURST HILL.

Medical Officer of Health—W. H. GIMBLETT, M.D.

Area in acres, 1901 census (land and inland water) 873

Population, 1901 census	...	...	4,786
,, 1904 estimated	...	...	5,050
Deaths registered in the district		...	53
Corrections ...	Additions	...	3
,, ...	Deductions	...	11

	1904.		Mean for 9 years, 1895—1903.
Nett Death-rate	8·9	...	12·2
Zymotic Death-rate	·8	...	1·8
Infantile Mortality	69·	...	120·
Birth-rate	23·0	...	22·9
Cases of Infectious Disease per 1,000 population ...	2·8	...	5·0

The report is printed.

Sewerage and Drainage. The effluent from the sewage works has been satisfactory throughout the year.

Factory and Workshop Act. The register includes two factories, four bakehouses, 27 workshops, and 12 domestic workshops. Ninety-six visits of inspection have been made, but no defects were found. There are no underground bakehouses, and no lists of outworkers were received.

Nuisances. More complaints than usual were received, but most referred to trivial matters. In two instances legal proceedings were required before certain very necessary works were carried out.

BURNHAM-ON-CROUCH.

Medical Officer of Health—CHAS. F. DOWNMAN, L.R.C.P., M.R.C.S.

Area in acres, 1901 census (land and inland water) 4,517

Population, 1901 census	...	...	2,919
,, 1904 estimated ...		...	3,250
Deaths registered in the district		...	43
Corrections ...	Additions	...	0
,, ...	Deductions	...	0

	1904.		Mean for 6 years, 1898–1903.
Nett Death-rate	13·2	...	13·5
Zymotic Death-rate	1·5	...	1·8
Infantile Mortality	73·	...	99·
Birth-rate	25·2	...	28·0
Cases of Infectious Disease per 1,000 population ...	4·9	...	9·3

The report is printed.

Oyster culture is one of the principal industries. The town has been free from typhoid fever for many years, and the River Crouch is in a very pure condition, so there is little or no risk of contamination of the oyster layings.

House Accommodation. Overcrowding still exists, and there is a lack of cottages with three bedrooms.

Sewerage and Drainage. The sewage works are still giving excellent results.

House Refuse. The scavenging of the town is carried out very regularly, ashbins being emptied once a week.

Water Supply. This has averaged 30,000 gallons per day throughout the year, or 9·2 gallons per head, and considerably more in summer. In the early part of the week the deep well (in the Thanet sands) is drawn upon, so as to secure soft water for washing purposes.

Infectious Disease. The isolation cottage has not been used during the year. All houses are disinfected after the occurrence of any notifiable disease with Mackenzie's Formalin Spray. The schools and school children also are disinfected when necessary.

CHELMSFORD.

Medical Officer of Health—H. W. NEWTON, M.R.C.S., D.P.H.

Area in acres, 1901 census (land and inland water) 2,308

Population, 1901 census	...	...	12,580
,, 1904 estimated		...	13,150
Deaths registered in the district		...	183
Corrections ...	Additions	...	0
,, ...	Deductions	...	37

	1904.		Mean for 13 years, 1891—1903.
Nett Death-rate	11·1	...	14·3
Zymotic Death-rate	·4	...	1·7
Infantile Mortality	65·5	...	99·
Birth-rate	25·6	...	26·1
Cases of Infectious Disease per 1,000 population ...	2·8	...	8·2

The report is printed.

House Accommodation. There is ample accommodation of all kinds, and the great majority of the houses are in very good sanitary condition. The cottage accommodation is at present very good, but the rentals are somewhat high. One or two insanitary areas require to be dealt with.

Sewerage and Drainage. There is nothing new to report under this heading. Practically the whole of the sewers are without adequate ventilation, and this subject is at present engaging the attention of the Sanitary Committee. There is strong opposition, however, chiefly from an æsthetic point of view, to the erection of the ventilating shafts required. The drainage of Bundick's Hill remains in an unsatisfactory condition, but plans for a drainage scheme have been prepared by the Surveyor and are at present undergoing the scrutiny of the Local Government Board.

Excrement Disposal. In all cases where practicable an efficient water supply to the w.c.'s has been obtained, but in this direction there is still room for much improvement.

House Refuse. This is regularly removed by the Corporation under the direction of the Surveyor, but some complaints are made that it is not done frequently enough. Justifiable complaints were also made during the summer of nuisance arising from the tip. Refuse is now carted out of the borough, and deposited in a disused gravel pit, but a destructor is required.

Water Supply. The quantity supplied has been quite adequate, averaging about 19 gallons per head per day. The supply from the deep well in Mildmay Road has kept well up to expectation, but a second deep well should be sunk, as the other two sources of supply furnish surface water, which should not be relied upon. The construction of the new reservoir at Long Stomps is going on quickly, and it will probably be completed during 1905.

Supervised Premises. The two lodginghouses are frequently inspected and have always been found satisfactory. The same statement applies to the slaughterhouses. The dairies, cowsheds, and milkshops are regularly and frequently inspected, and no nuisance has been found to exist. The two offensive trades are well conducted, and have occasioned no complaints.

Factory and Workshop Act. There are 80 workshops on the register, including 20 bakehouses, one of which is underground. All the bakehouses are frequently inspected and well kept. Six defects were found on inspection of the workshops. All were remedied. Four lists of outworkers were received, containing 12 names.

Nuisances. House to house inspection is carried out, but more of this work might be done with advantage. No nuisance of a serious character has been brought to light.

Infectious Disease. Houses from which infectious disease has been notified are at once visited by the Medical Officer of Health and Sanitary Inspector. If they find that removal to hospital is required this is effected by the officers of the Joint Hospital. Disinfection of bedding, etc., is carried out by the Joint Hospital staff, and that of rooms by the Sanitary Inspector.

The Isolation Hospitals for the Urban and Rural Districts remain as last year, *i.e.*, at Baddow Road, Coval Lane, and Galleywood. The new Joint Isolation Hospital stills exists on paper only.

CHINGFORD.

Medical Officer of Health—GEO. F. FULCHER, M.B., C.M.

Area in acres, 1901 census (land and inland water) 2,808

Population, 1901 census 4,373

„ 1904 estimated 5,030

Total deaths registered in the district... 72

Corrections ... Additions ... 0

„ ... Deductions ... 25

	1904.	Mean for 9 years, 1895—1903.
Nett Death-rate	9·3 ...	11·2
Zymotic Death-rate ...	1.6 ...	1·8
Infantile Mortality	136· ...	108·
Birth-rate	20·5 ...	24·0
Cases of Infectious Disease per 1,000 population ...	5·0 ...	4·7

The report is printed.

Sewerage and Drainage. Considerable improvements and additions have been made at the sewage farms, and others are still being carried out.

House Refuse. Weekly removal of bins has been carried out satisfactorily by the contractor.

Supervised Premises. The dairies, cowsheds, and milkshops have been periodically inspected and found satisfactory. New drainage has been provided for the only slaughterhouse in the district; no complaints have since arisen.

Factory and Workshop Act. The workshops and factories have been periodically inspected during the year, and their condition found satisfactory.

CLACTON.

Medical Officer of Health—JNO. W. COOK, M D.

Area in acres, 1901 census (land and inland water) 4,069

Population, 1901 census 7,456

,, 1904 estimated 7,704

Deaths registered in the district ... 107

Corrections... ... Additions... 4

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	13·9* ...	14·0
Zymotic Death-rate	1·6 ...	2·0
Infantile Mortality	115·* ...	125·
Birth-rate	24·9 ...	28·1
Cases of Infectious Disease per 1,000 population ...	7·0 ...	10·7

The report is printed.

Physical Features, etc. The district is very flat and lies generally on London clay, with some pockets of gravel. 1945·7 hours of bright sunshine were registered and 15·65 inches of rainfall.

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*Dr. Cook, by excluding the deaths of all non-residents, obtains a general Death-rate of 11·03, and an Infantile Death-rate of 98·95.

House Accommodation. Houses for the working classes are good, and most of them of modern construction. Building bye-laws are enforced. Forty-two new houses have been built during the year.

Sewerage and Drainage. This is in good order, and new roads are sewered when made up. There has been considerable difficulty in getting rid of storm water on occasions of sudden heavy rainfall. The Medical Officer of Health believes that this may be remedied by an alteration of the eastern outfall, which he recommends as much cheaper and more effectual than the provision of a new storm relief sewer, which has also been proposed.

House Refuse. This is removed by the Council's own men, and, after sorting, disposed of in brickmaking and by burning. Complaints arise from this source, and the provision of a dust destructor will soon be necessary.

Water Supply. This is now derived exclusively from the new well at Great Bentley, being pumped thence to the reservoirs and tank at Clacton-on-Sea. It is abundant and of excellent quality.

Supervised Premises. Inspection is carried out. There is no common lodging house, but many houses are let in lodgings, for which no bye-laws exist.

Factory and Workshop Act. There are 64 workshops and 21 workplaces on the register These have been inspected, and the few minor nuisances met with were at once remedied. The sanitary accommodation is satisfactory, and is under the Council's control, sec. 22 of the Public Health Acts Amendment Act having been adopted. The bakehouses are satisfactory. There is only one underground bakehouse in the district. For this a certificate of fitness was at first refused, but has since been granted, contrary to the advice of the Medical Officer of Health.

Infectious Disease. Phthisis is voluntarily notifiable, but little advantage is taken of this, only two cases having been

notified during the year. The rooms occupied by phthisical patients are disinfected gratuitously when desired.

Isolation Hospital. This has been enlarged by ten beds, disposed in two wards of four beds each and two isolation rooms for single patients. The permanent staff has been increased to two resident nurses and a wardmaid. The charges to patients are very small, and, when necessary, are remitted altogether. The net cost to the ratepayers comes out at a trifle under £5 per patient (40 cases isolated).

COLCHESTER.

Medical Officer of Health—W. G. SAVAGE, M.D., B.SC., D.P.H.

Area in acres, 1901 census (land and inland water) 11,333

Population, 1901 census ...	...	38,373
,, 1904 estimated	...	39,700
Corrections ...	Addition ...	1
,, ...	Deductions ...	41

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	15·9 ...	15·0
Zymotic Death-rate ...	3·2 ...	1·7
Infantile Mortality	176· ...	130·
Birth-rate	26·0 ...	25·6
Cases of Infectious Disease per 1,000 population ...	9·4 ...	8·1

The report is printed, and contains reports by the Surveyor, Waterworks Engineer, and Sanitary Inspector.

Sewerage and Drainage. New sewers have been constructed of a total length of nearly 5 miles. The average daily flow of sewage pumped into the tanks at the outfall works was over 1,000,000 gallons per day. The pressed sludge obtained by precipitation of this sewage was all disposed of to the farmers around.

A table is given of localities of escapes of sewer gas. The largest number (11) came from joints of external soil pipes.

Water Supply. The average daily consumption per head was about 17 gallons. 4,410 yards of new main were laid down.

Supervised Premises. The common lodginghouse has been regularly inspected, and is kept in a satisfactory condition.

Tents and vans have been inspected, and one case of measles found was dealt with.

A special investigation of the dairies, cowsheds, and milkshops was made during the year by Dr. Savage. Colchester is peculiar, perhaps unique, amongst towns of similar size in obtaining the great bulk of its milk from cowsheds situated within the borough boundary. This has two advantages. Supervision is greatly facilitated, and the milk is consumed in a very fresh condition. The 26 cowsheds are, with two or three exceptions, structurally satisfactory. Three instances of overcrowding were discovered, the standard being 800 cubic per cow, as laid down in the regulations. Eight were found to be dirty, and four of these very dirty. Almost all have manure heaps close to the cowshed. Water supplies are generally, but not always, satisfactory. The milk is in no case artificially cooled. On the whole the cowsheds compare favourably with those of other parts of the county.

There are 37 general dealers registered as milk sellers, and 9 dairies. The latter deal in large quantities of milk, and the premises are on the whole clean and well ventilated, but the milk is sold in uncovered vessels. The general dealers dispose of but small quantities of milk. The shops, usually small general provision shops, are dusty, and the milk uncovered, but few shops sell markedly objectionable substances along with the milk. All are, however, dusty, and some dirty. A bye-law enforcing the covering of milk vessels is recommended.

Action was required in the case of one offensive trade. Complaints had been received of a leather dressing factory causing serious nuisance. As a result of the action taken the

objectionable processes were discontinued, and the complaints have ceased.

Factory and Workshop Act. This is actively administered. There are 221 workshops, including 44 bakehouses, on the register. The total number of inspections made was 1,543, including 1,182 of the homeworkers' premises. 365 defects were found, and 347 remedied. 67 lists, containing the names of 3,699 outworkers, were received, and 1,791 addresses were transmitted to other authorities. In 25 cases homework had to be prohibited owing to infectious disease in the workers' premises.

Nuisances, etc Comparatively little house-to-house inspection could be accomplished owing to the pressure of other work. Seven dilapidated houses were repaired and four closed. Prompt inquiry is made in all cases of complaint as to nuisance, and informal notice generally secures abatement.

Infectious Disease. The voluntary notification of Consumption came into force on June 15, since when 31 notifications have been received. Every case is visited and careful inquiries made and instructions given. Rooms are also disinfected and, if necessary, pocket spittoons provided. School notification of cases, known or suspected, of Measles, Whooping Cough, Chicken-pox, and Mumps came into force on March 1st.

A number of improvements have been effected at the Isolation Hospital. A fence and a porter's lodge have been erected, and a Washington Lyon steam disinfector installed. The laundry has been enlarged and modernized, and the wards heated by steam.

Much use has been made of the Municipal Laboratory in investigating suspected cases of infectious disease and possible channels of its communication.

EAST HAM.

Medical Officer of Health—A. W. BEAUMONT, B.A., M.D.

Area in acres, 1901 census (land and inland water) 3,326

Population, 1901 census ...	...	96,018
,, 1904 estimated	...	116,902
Deaths registered in the district	...	1,406
Corrections ... Additions	...	208
,, ... Deductions	...	2

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	13·8 ...	13·9
Zymotic Death-rate	2·9 ...	2·6
Infantile Mortality	155· ...	142·
Birth-rate	31·8 ...	36·5
Cases of Infectious Disease per 1,000 population ...	10·7 ...	11·15

The report is printed, and includes a report by the Chief Sanitary Inspector.

Physical Features, etc. The subsoil is sand and gravel, overlying the London clay; some of the district in the south and in the Roding valley is marshy. The principal local industries are the Beckton Gas and Chemical Works, the Royal Albert Docks, and 'bus and tramway depôts.

House Accommodation. Overcrowding is becoming more prevalent than formerly. It was found necessary in 17 cases to take action for its abatement. Seven cottages, which had been found to be unfit for habitation, were demolished, and three others were repaired and so rendered fit. New and more stringent bye-laws for the sanitation of new buildings have been submitted for approval to the Local Government Board.

Sewerage and Drainage. Much attention is being devoted to the perfection of the main sewerage. The rapid growth of the borough makes immense demands upon the present system, and new main sewers are being constructed in consequence. Sewer ventilation receives close attention, and where the surface ventilators give reason for complaints 30 feet shafts are erected.

The outfall works, which have recently been re-constructed at considerable expense, give satisfactory results, the effluent being said to be of good class.

The drainage by combined drains of 264 houses has been re-constructed by the Council's workmen at the owner's expense. Prior to the passing of the East Ham Improvement Act, 1903, this burden would have fallen on the rates. The Council employ special men for the work of drain clearing and attach much importance to their system of doing so, as chimney sweeps and other non-experts called in to clear drains generally start by breaking pipes, doing permanent damage, which gets covered up and overlooked until, perhaps, disease necessitates the drain being tested. A considerable proportion of the defects found on testing were not in the drain itself but were connected with the intercepting trap. Special attention is now given to this matter. Shoddy workmanship now renders the workman, as well as his employer, liable to punishment under the East Ham Improvement Act, 1903, but it is to be regretted that there is not power also to prevent the use of shoddy material, much of which is in use for drain ventilating pipes.

House Refuse. Removal has for many years been effected by the Council. It is regularly effected once a week in all parts of the borough, and few complaints have been received. Four additional roller-top vans have been purchased out of current rates, bringing the total up to eleven. Motor traction is at present being considered. Trade refuse is collected free of charge. A refuse destructor of two four-chambered cells has been constructed close to the sewage works. The steam generated will be used for sewage pumping.

Water Supply. A constant supply, of excellent quality, has been maintained by the Metropolitan Water Board. No considerable interruption has occurred. The consumption is about 30 gallons per head per day.

Supervised Premises. The 14 slaughterhouses have been regularly inspected.

There are 5 cowsheds and 151 dairies registered. 161 inspections were made. The general condition may be said to be satisfactory.

Careful attention is given to the market places and shops. An inspector is on special duty every Saturday evening. This supervision is facilitated by the fact that the food supplies of the borough are in the hands of good class tradesmen, with shops in the main thoroughfares.

Factory and Workshop Act. There are 210 factories and workshops on the register, including 51 bakehouses, 12 of which are underground. Notices for abatement of nuisance, where discovered, were in every instance complied with, and no difficulty was met with in enforcing the provisions of the Act. Additional exits in case of fire have been provided in three factories. The condition of homeworkers' premises is carefully attended to. The bakehouses are generally well kept but ventilation is frequently deficient.

Nuisances, etc. House-to-house, as well as special, inspections are made, and at 59 per cent. of the premises inspected sanitary works were found to be required. Offal collection has occasioned some complaints, but annoyance from this source has been reduced to a minimum. Collection is largely done late at night. The eight public urinals are cleansed daily, and public house urinals are regularly inspected, and generally well kept.

Back passages at the rear of business premises are often neither paved nor drained, and as the tradesman frequently uses them for washing his horse and van, serious nuisance results. The Council, however, has no power to enforce pavement and drainage of these passages.

Gypsies continue to give trouble, and have frequently to be moved out of the borough.

Infectious Disease. Premises are visited immediately after the notification is received, and verbal and printed directions as to isolation are given. Inquiry is made at the same time

into source of infection, and sanitary defects are searched for, and, if found, remedied.

Head teachers of day schools, superintendents of Sunday schools, and the librarian of the Public Libraries are daily advised of the occurrence and termination of all cases. Pawnbrokers and school attendance officers are also notified.

Disinfection of premises by fumigation is carried out upon receipt of an intimation from the medical attendant, on a postcard left at the house for the purpose, of the termination of the illness. A number of books borrowed from libraries have also been disinfected. Three depots are maintained in different parts of the borough from which disinfectants are supplied every morning to persons applying for them with an order from the department.

The scarlet fever hospital is of a temporary character, and is now inadequate to comply with the demands of the borough. It has 32 beds, and the convalescent home in the Central Park 28, making 60 in all for the treatment of this disease. Plans and estimates have been agreed to for a new permanent scarlet fever hospital, with accommodation for 60 beds. A statement of expenses is appended. The total amounts to £5,785 2s. 5d. The agreement with West Ham for the isolation of East Ham small-pox cases in the West Ham hospital at Dagenham has been renewed for five years.

Open Spaces, Cemeteries, etc. There are five parks and pleasure grounds with a total area of 160 acres. Besides these seven acres have been apportioned to allotments. The four large cemeteries in the northern part of the borough cover 250 acres. The largest belongs to the City of London. All have been inspected and found satisfactory.

The River Roding is still frequently in a polluted condition.

EPPING.

Medical Officer of Health—TREVOR FOWLER, L.R.C.P. & S.I., D.P.H.

Area in acres, 1901 census (land and inland water) 1,420

Population, 1901 census 3,789

„ 1904 estimated 4,013

Total deaths registered in the district... 68

Corrections ... Addition ... 1

„ ... Deductions ... 22

	1904.	Mean for 8 years, 1896—1903.
Nett Death-rate	11·7 ..	14·0
Zymotic Death-rate	1·25 ...	1·6
Infantile Mortality	104· ...	108·
Birth-rate	23·9 ...	25·9
Cases of Infectious Disease per 1,000 population ...	1·2 ...	6·5

The report is printed.

Physical Features, etc. The town is situated in the centre of the district, at an altitude of over 300 feet above sea level. The soil consists of loam and gravel overlying the London clay, which is exposed in the southern part of the district. The population is largely residential. The principal local industries are agriculture (chiefly pastoral) and an iron foundry.

House Accommodation. Great improvement has been effected in the housing of the working classes. Many new cottages of a superior description have been built, and 24 old ones have been put in habitable repair during the year. Nearly all are now connected with the public sewers and water mains.

Sewerage and Drainage. There are four separate sewage outfalls, worked principally on the broad irrigation system. The soil being for the most part a stiff clay this system has proved unsuitable, and the effluent in all cases is much below the necessary standard of purity. During the year a conviction was in consequence obtained by the Lea Conservancy Board. A scheme is now under contemplation whereby the three northern outfalls are to be connected by means of a sewer, and

the sewage treated in bacteria tanks. Similar bacterial treatment will probably be necessary at the southern outfall.

Excrement Disposal. Many of the w.c.'s, both old and new, are without flushing cisterns, and that not only in the houses of the working classes. A considerable number have been properly supplied with water during the year.

House Refuse. The new arrangement for the bi-weekly collection of dust and refuse is a great improvement upon the former method.

Water Supply. With few exceptions the dwelling houses are supplied with water from the Herts and Essex Waterworks Company.

Factory and Workshop Act. There are 18 workshops on the register. All have been inspected and found satisfactory.

Nuisances. "Inspections, both systematic and special, have been made of the different parts of the district during the year, and it is satisfactory to be able to report how few defects have been discovered."

FRINTON-ON-SEA.

Medical Officer of Health—H. W. GODFREY, M.D., M.R.C.S.

Area in acres, 1901 census (land and and inland water) 403

Population, 1901 census	...	...	644
,, 1904 estimated	...	...	850
Deaths registered in the district		...	7
Corrections	Additions	...	0
,, ...	Deductions	...	0

	1904.	Mean for 3 years, 1901—1903.
Nett Death-rate	8·2 ...	9·3
Zymotic Death-rate	0· ...	·4
Infantile Mortality	105· ...	119·
Birth-rate	22·2 ...	25·1
Cases of Infectious Disease per 1,000 population	0· ...	1·4

The report is printed.

House Accommodation. A considerable number of new houses are being built. The strict enforcement of the building bye-laws is required.

Sewerage and Drainage. The Raglan, Oxford, and Cambridge Roads have been sewered, and the district is efficiently drained. Drains are flushed periodically. The sewer ventilating columns have from time to time given rise to complaint. These have now, by Dr. Thresh's advice, been made higher, and the result is, so far, satisfactory.

House Refuse. No complaints have arisen. The more frequent removal during the summer months has proved satisfactory.

Water Supply is abundant and of good quality.

GRAYS.

Medical Officer of Health—JOHN A. WARD, M.D.

Area in acres, 1901 census (land and inland water) 1,359

Population, 1901 census	13,834
,, 1904 estimated ...	15,250
Deaths registered in the district ...	162
Corrections ... Additions ...	17
,, ... Deductions...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	11·7 ...	12·4
Zymotic Death-rate	1·2 ...	2·2
Infantile Mortality	135· ...	123·
Birth-rate	29·0 ...	31·3
Cases of Infectious Disease per 1,000 population ...	7·7 ...	12·6

The report is printed.

Physical Features, etc. The soil is gravel and alluvium, overlying a deep bed of chalk.

The population consists mainly of the working classes, who are for the most part employed at Tilbury Docks, in cement factories, and in the building trade.

House Accommodation. The houses being built are mainly cottages with two and three bedrooms. Of the latter, which let at 8s. to 10s. a week, there is now a sufficient supply, but keen competition still exits for the cheaper houses, rented at 7s. or under.

Sewerage and Drainage. No complaints have been received of smells from the street manholes since ventilating shafts have been erected. The new sewers, completed in March, have greatly reduced the flooding which previously occurred in certain parts of the town. The effluent from the outfall works has, since the adoption of biological methods of purification, been of a satisfactory character. In order to prevent nuisance arising from the works earth has been placed on the covers over the channels and outfall of the septic tank, and the gas issuing from the tanks is now burnt.

Excrement Disposal. Practically every house is provided with a water closet, and all except about 58 are connected with the system of sewers.

House Refuse is collected weekly and burnt in the destructor. Refuse from fish shops and other offal is also thus disposed of.

Water Supply. This is supplied by the South Essex Water Company from deep wells in the chalk. It is of great organic purity, but very hard. The supply is constant.

Supervised Premises. There is one common lodginghouse, which is clean and well kept.

The seven slaughterhouses have all been visited periodically and are satisfactory.

There are 27 milk purveyors and two cowkeepers registered. All have been repeatedly visited. Five breaches of the regulations have been reported and remedied.

Meat and other foods exposed for sale are regularly inspected, special attention being directed to meat stalls opened at week-ends only.

Factory and Workshop Act. Sixty-eight workshops, including 13 bakehouses, are now registered. All have been inspected at least once, and 12 defects found and remedied. In two

instances where drains were found opening into bakehouses this has been altered. All bakehouses are now satisfactory.

Nuisances. Systematic house-to-house inspections have been regularly made, and a large number of nuisances remedied, especially defective w.c.'s and blocked drains.

The back roads, which for financial reasons have not been made up, constitute a serious nuisance in wet weather.

Infectious Disease. Efforts are made to secure hospital isolation of all cases of small-pox and enteric fever, and of all severe cases of diphtheria, but only those cases of scarlet fever are removed which cannot be isolated at home.

The provision of a steam disinfector in Grays is recommended as preferable to the present system of disinfection at the Orsett Joint Hospital. Disinfection is carried out after deaths from phthisis.

HALSTEAD.

Medical Officer of Health—C. GORDON ROBERTS, M.B.

Area in acres, 1901 census (land and inland water) 647.

Population, 1901 census ...	...	6,073
,, 1904 estimated ...	...	6,100
Deaths registered in the district	...	91
Corrections ...	Additions ...	1
,, ...	Deductions ..	17

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	12·3 ...	16·6
Zymotic Death-rate	·8 ...	1·7
Infantile Mortality	86· ...	118·
Birth-rate	21·0 ...	22·4
Cases of Infectious Disease per 1,000 population ...	11·5 ...	7·2

The report is printed.

House Accommodation. The demand for houses is not so great as it was a few years ago, and fewer have been built, but new cottages at a moderate rent are occupied as soon as built.

Sewerage and Drainage. The main sewer, which was found

to be two-thirds silted up, has been cleared. Clearance will be effected regularly in future.

Only the upper part of the sewage farm is cropped. The lower portion remains a sewage-logged swamp, which requires to be drained, and levelled up so that the plots can be worked in rotation.

House Refuse is found increasingly difficult to dispose of. An attempt has been made to burn it, but without much success. Few fields are available for its disposal near the town, whilst the expense prevents it being taken far. Some cheap form of destructor is required.

Supervised Premises. All the slaughterhouses but one were found in good order. Special attention has been paid to the cowsheds, and considerable improvement effected in one. There are no milkshops in the town, but efforts are being made to ensure unsold milk being stored by the itinerant vendors in proper, clean, ventilated places, and not in living rooms, stables, and such like, as has been the case.

Factory and Workshop Act. The workshops have been visited, and found generally in good order. No list of out-workers has as yet been prepared.

Nuisances. A number of sanitary defects were found in houses where diphtheria had occurred, chiefly due to settlement of drains. All pipes within 10 yards of buildings should be laid on six inches of concrete.

Serious defects were found in the sanitary arrangements of two schools where diphtheria was prevalent.

HARWICH.

Medical Officer of Health—H. GURNEY, L.R.C.P., M.R.C.S.

Area in acres, 1901 census (land and inland water) 1,541

Population, 1901 census ...		...	10,070
,, 1904 estimated...		...	10,520
Deaths registered in the district		...	142
Corrections ...	Additions ...		11
,, ..	Deductions ...		0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·5	... 14·0
Zymotic Death-rate	·9	... 1·0
Infantile Mortality	127·	... 124·
Birth-rate	27·8	... 33·2
Cases of Infectious Disease per 1,000 population ...	10·7	... 4·9

The report is printed.

Sewerage and Drainage. Upper Dovercourt requires sewering, the present system of draining into dead wells and ditches being extremely unsatisfactory. Additional sewer ventilation is required in First Avenue, and elsewhere at the top of steep inclines. Two ventilating shafts have been erected on the line of the high level sewer, and bad smells are now much less complained of than in former years.

Water Supply. The water supplied by the Tendring Hundred Water Company has been subjected to analysis by two different authorities, and pronounced by both to be of great organic purity.

Factory and Workshop Act. There are seven workshops on the register, which is incomplete. None were inspected during the year. Two underground bakehouses are in use. Twenty-five inspections of workplaces have been made, and one defect found. The name of one outworker was received, and the premises inspected. 'The act is well administered' (?) and no complaints have been received from the Factory Inspector.

ILFORD.

Medical Officer of Health—C. F. STOVIN, M.A., D.P.H.

Area in acres, 1901 census (land and inland water) 8,496

Population, 1901 census			41,234
,, 1904 estimated... ...			59,700
Deaths registered in the district ...			933
Corrections ...	Additions ...		29
,, ...	Deductions ...		370

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	10·9	11·1
Zymotic Death-rate	1·8	2·0
Infantile Mortality	128·	127·
Birth-rate	28·6	29·0
Cases of Infectious Disease per 1,000 population ...	8·5	9·9

(The above rates for 1904, except that of cases of infectious disease, are calculated, not upon the total estimated population, but on a net population of 54,120 obtained by deducting from the total the institutional populations in Dr. Barnardo's Homes, and the Claybury and West Ham Asylums.)

The report is printed, and includes a report by the Chief Sanitary Inspector.

Physical Features, etc. The surface generally is gently undulating. The subsoil is gravel for the most part, but in some portions the underlying London clay comes to the surface, and one area is covered by brick-earth.

Sewerage and Drainage. Good progress has been made with the extension of the sewage works. The two new open septic tanks have a capacity of 950,000 gallons each, and with the third tank provided from the old settling tanks give a septic tank capacity of 2,500,000 gallons in all. Ten contact beds, of $2\frac{1}{2}$ acres total area, have been commenced. They will be made of coke breeze, and 5 feet deep. The effluent discharges into the Thames below Barking Creek.

House Refuse. A weekly collection is effected throughout the whole district by the Council's employees. Up to 1901 this work was carried out by contractors, but it was then found that it could be more efficiently and cheaply effected under a system of direct employment. It is under the direction of the Sanitary Inspector, who gives a number of particulars as to quantity collected and cost of collection. The latter comes to ·89 penny per house per week. Disposal is on the brick-field where it causes many complaints of smell and flies. The question of providing a destructor is under consideration.

Water Supply. The northern portion of the district receives a satisfactory supply from the Metropolitan Water Board. The southern portion is supplied by the South Essex Water Company. This water has given a much better result on analysis than has occurred before. The Company is sinking a well in the Roding valley in the district.

Supervised Premises. There are on the register seven cowsheds, four of which conform to the required standard, and 42 milkshops and dairies. These latter should be more regularly inspected.

In addition to the cowsheds in the district, many of the farms sending milk into Ilford have been inspected. There are about 30 of these in all, scattered over East Anglia. This inspection is rendered possible by the new Ilford Improvement Act, which gives the necessary powers. Power has also been obtained to take samples of milk outside the district, and to require the isolation of diseased cows and notification of tuberculosis amongst cows. Dairymen must notify cases of infectious disease amongst their emplcyees and must, if required, furnish lists of customers and of sources of supply. Compensation is provided for.

The farmers inspected were found very willing to adopt any reasonable suggestions. A list of rules drawn up for their guidance in hygienic milk production is appended.

There are four slaughterhouses, three of them licensed. One is satisfactory, the others not so good. All are periodically inspected.

There are no offensive trades in the district.

The vegetable, fruit, and fish shops are inspected.

A special report is included on the condition of the schools, and the propagation of infectious diseases therein.

Factory and Workshop Act. There are 293 workshops on the register, including 32 bakehouses. The inspections made under the Act number 486, 16 defects being found, of which 14 were remedied (chiefly failures as to list of outworkers). 22 lists of outworkers were received, containing 46 names. 66

outworkers' addresses were forwarded to, and 26 received from, other authorities. The bakehouses are frequently inspected, and this is found to be necessary to keep some of them in a reasonably suitable condition.

Nuisances, etc. The district is systematically inspected, especially in the localities where nuisances are likely to exist and recur.

Gipsies caused considerable trouble, and the assistance of the police was frequently required for the purpose of removing them.

In early summer a great nuisance was caused to part of the district by a most offensive smell coming from the direction of the Wanstead Sewage Works when the wind was blowing from that quarter. Since certain alterations, then in progress at the works, were completed there has been little to complain of.

Infectious Disease. The compulsory notification of Measles ceased in May, 1904. The disease was unusually prevalent during the year, as evidenced by the number of cases reported by teachers and attendance officers. In December the Education Committee requested that Measles should be restored to the list of diseases notifiable under the Act. Reasons are adduced, however, for supposing that the present system of school notification effects almost all that compulsory notification could, and that the money would be better spent in increasing the number of attendance officers, which would secure as complete notification as the adoption of the Act, and other benefits as well.

A man was convicted under the Notification Act for failing to notify a case of small-pox.

Disinfection of bedding, &c., is effected in a large Washington Lyon Steam Disinfector at the hospital, separate vans being used for infected and disinfected articles. Rooms are disinfected by spraying with formalin, 1 or 2 per cent., from a Mackenzie spray. A disinfector for books has been provided. It consists of a closed chamber, in which formalin tablets are burned.

LEIGH-ON-SEA.

Medical Officer of Health—W. D. WATSON, M.R.C.S., L.R.C.P.

Area in acres, 1901 census (land and inland water) 1,527

Population, 1901 census	...	...	3,667
,, 1904 estimated	...	...	4,773
Deaths registered in the district		...	67
Corrections	...	Additions ...	3
,,	...	Deductions ...	0

	1904.	Mean for 7 years, 1897—1903.
Nett Death-rate	14·7 ...	12·8
Zymotic Death-rate	·8 ...	3·1
Infantile Mortality	150· ...	99·
Birth-rate	25·1 ...	26·2
Cases of Infectious Disease per 1,000 population ...	1·9 ...	16·0

The report is typewritten.

Sewerage and Drainage. The outfall works have been less heavily taxed than last year, owing to the drier season. The usual standard of purity of the effluent has been maintained, and no adverse reports received from the Thames Conservancy.

Water Supply. The new reservoir is now in use, and it has been decided to duplicate the pumping plant and instal an additional air-lift in order to prevent the possibility of break-down. The main question of an adequate and constant supply is, however, still unsolved. The yield of the well is slowly diminishing year by year. A scheme for making a new bore-hole close to the present well has been considered but not decided upon. A thorough examination of all the water mains and fittings has resulted in reducing the consumption from 20 to 13 gallons per head daily.

Factory and Workshop Act. The workshops and workplaces have been inspected. No defects were found. No list of outworkers has been received.

Infectious Disease. The great diminution in cases of typhoid fever is attributed, in part at least, to the general use of steamers

for cooking cockles. These are very satisfactory. Nothing further has been done in the matter of providing an isolation hospital. The Council still rents a small cottage, which would suffice for one or two cases.

LEYTON.

Medical Officer of Health—A. F. PESKETT, M.R.C.S.

Area in acres, 1901 census (land and inland water) 2,594

Population, 1901 census	...	...	98,912
,, 1904 estimated ..		...	104,000
Deaths registered in the district		...	2,270
Corrections ...	Additions ...		0
,, ..	Deductions ...		869

	1904.	Mean for 13 years, 1891 - 1903.
Nett Death-rate	13·5 ...	13·1
Zymotic Death-rate ...	2.7 ...	2·6
Infantile Mortality	142 ...	134·
Birth-rate	30·75 ...	31·6
Cases of Infectious Disease per 1,000 population ...	7·3 ...	10·9

The report is printed.

House Accommodation. Thirteen houses were closed as unfit for human habitation; eight of these have since been repaired.

Sewerage and Drainage. Several new sewers have been constructed, and 66 new ventilating shafts erected.

House Refuse. Close on 20,000 tons were carted to the destructor.

Supervised Premises. There are 19 slaughterhouses, which are periodically visited. Seven nuisances were met with amongst them.

The cowsheds in the district number eleven. Two were found to be overcrowded. Where infectious disease occurred in the homes of persons engaged in the milk trade the men were compelled to relinquish work till all danger of infecting the milk was over.

Icecream vendors' premises are now subject to supervision

under a new private Act, which also gives greater power over the milk supply and for preventing infectious disease.

Factory and Workshop Act. The number of workshops is 97. These premises, with 241 dwellings of outworkers, have been systematically inspected. Eight cases of overcrowding and 76 other sanitary defects were discovered.

Nuisances. A nuisance resulting from the floods of 1903 was remedied during this year. In the case of houses which had been flooded notice was served to remove the saturated earth and filth from beneath the flooring and to concrete the site. This was done. The sewers in these localities have since been enlarged.

The roadways at the rear of shops should be properly paved and drained by the builder.

Infectious Disease. The steam disinfector is more and more used, and it is now quite the general practice to disinfect by its means after any illness, and not only after infectious cases as heretofore.

The equipment of the existing (temporary) isolation hospital has been improved by the provision of a number of "Perfection" chemical fire extinctors.

A sub-committee appointed for the purpose has visited several neighbouring hospitals in order to decide upon plans for a permanent building. As a result of their deliberations plans have now been drawn by the Surveyor, and there, for the moment, the matter rests. Fever hospital accommodation is a necessity in this densely populated district.

LOUGHTON.

Medical Officer of Health—A. BULLER-HARRIS, M.A., M.B., B.CH. OXON.

Area in acres, 1901 census (land and inland water)			3,961
Population, 1901 census	...	...	4,730
,, 1904 estimated	...	...	5,100
Total deaths registered in the district			47
Corrections ...	Additions ...		0
,, ...	Deductions ...		1

	1904.	Mean for 4 years, 1900—1903.
Nett Death-rate	9·0*	... 9·2
Zymotic Death-rate	·4	... 1·0
Infantile Mortality	86·	... 124·
Birth-rate	20·6	... 26·4
Cases of Infectious Disease per 1,000 population	1·6	... 7·2

The report is printed.

General character of the district. A considerable proportion of the area consists of grazing land attached to dairy farms. The Uplands estate has now been laid out for residential houses, and several are already completed. Here, and elsewhere in the district, outcrops of gravel occur.

House Accommodation. The cottage property is on the whole in good condition, but the Council's attention is once more drawn to the group of crowded wooden cottages on Pump Hill, which are dilapidated and back-to-back.

Sewerage and Drainage. The water-carriage system is in use throughout the greater part of the district, and is on the whole efficient. The purification at the outfall works is hampered by insufficiency of the available land. It will be necessary at some future date to employ a bacterial method of purification.

Certain portions of the district, namely, Chigwell Lane; part of England's Lane, and Debden Green, cannot be drained into the sewers, and the houses, therefore, drain primarily into cesspools. These localities have received particular attention, and their condition is on the whole satisfactory. The w.c.'s in the older cottages are not provided with flushing tanks.

House Refuse. This is removed fortnightly where required, and is dealt with at the sewage farm.

Water Supply. This is derived from the East London Water Company's deep well in the chalk, and is abundant, but hard. There are no surface wells.

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*The Medical Officer of Health, by deducting the deaths of two suicides in the Forest, obtains a nett death-rate of 8·6.

Supervised Premises. There are no common lodginghouses in the district. The alterations in dairies, cowsheds, and slaughterhouses, under the recently adopted bye-laws, have for the most part been carried out to the satisfaction of the sanitary authority.

Factory and Workshop Act. Thirty-three inspections have been made of the 26 workshops on the register. Only two defects were met with, and these were promptly remedied.

Nuisances. Owing to the strict operation of the new bye-law relating to pigs, very few of these are now bred and kept in the district. The Staples road pond was thoroughly cleansed during the summer.

MALDON.

Medical Officer of Health—H. REYNOLDS BROWN, M.D., C.M.

Area in acres, 1901 census (land and inland water) 3,028

Population, 1901 census	...	...	5,565
,, 1904 estimated	...	...	5,618
Total deaths registered in the district		...	106
Corrections	...	Additions ...	0
,,	...	Deductions ..	27

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·1 ...	15·9
Zymotic Death-rate	·9 ...	1·6
Infantile Mortality	83·3 ...	104·
Birth-rate	25·6 ...	25·7
Cases of Infectious Disease per 1,000 population ...	8·0 ...	7·5

The report is typewritten.

General character of the district. Five-sixths of the whole area is of a purely rural nature, and only very sparsely inhabited.

House Accommodation. This is fairly satisfactory. Some of the older houses are deficient in air space and ventilation, and

some of the cottages in St. Peter's parish are liable to flooding from high tides. The building bye-laws are, on the whole, well enforced.

Sewerage and Drainage. The greater part of the town sewage is waterborne, and is discharged in a crude state into the estuary of the Blackwater. The foreshore is, in consequence, polluted in many places.

Excrement Disposal. There are still numerous privies in some parts of the town, many of which are in a ruinous condition, and pollute the surrounding soil. They are being gradually re-placed by w.c.'s.

House Refuse. The sanitary authority collects this on request. Unfortunately it has not yet seen its way to regular and systematic collection.

Water Supply. This is derived from the Corporation's deep wells in the greensand underlying the London clay, and is of excellent quality but inadequate in amount, the total yield being only about ten gallons per inhabitant.

Factory and Workshop Act. Inspections were carried out personally by the Medical Officer of Health. No defects were found, except failure to send in lists of outworkers.

Infectious Disease. For the first time in at least seven years not a single case of enteric fever occurred which was infected within the district.

Isolation is carried out at the Maldon Joint Hospital Board's hospital at Heybridge.

Clothing and bedding are disinfected by means of a Thresh's steam disinfector at the isolation hospital, and premises by means of the formalin spray. Disinfection is carried out at the public expense after deaths from phthisis.

ROMFORD.

Medical Officer of Health—A. WRIGHT, M.D.

Area in acres, 1901 census (land and inland water) 5,630

Population, 1901 census 13,656

,, 1904 estimated ... 14,700

Deaths registered in the district ... 203

Corrections ... Additions ... 4*

,, ... Deductions... 79*

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	10·1* ...	13·7
Zymotic Death-rate... ...	2·0 ...	1·7
Infantile Mortality	117· ...	112·
Birth-rate	28·4 ...	31·3
Cases of Infectious Disease per 1,000 population ...	6·4 ...	10·8

The report is printed.

Water Supply. A few samples of drinking water, the purity of which was suspected, have been analysed. When these were found to be impure the South Essex Company's water was laid on.

Supervised Premises. The various bakehouses and slaughter-houses have been inspected, and found in a satisfactory condition.

Nuisances. Periodical inspection of the various parts of the district has been made.

Infectious Disease. Every case notified is reported to the Sanitary Inspector, who visits and reports to the Medical Officer of Health in all cases not personally investigated by the latter, and who also supplies disinfectants, sees to the patient's removal to the Isolation Hospital, when such a course is adopted, and disinfects the premises, bedding, clothing, &c.

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*These corrections give a nett total of deaths of 128, with nett death-rate of 8·7, as against 148 and 10·06 in the report.

SAFFRON WALDEN.

Medical Officer of Health—W. ARMISTEAD, M.B.

Area in acres, 1901 census (land and inland water) 7,502

Population, 1901 census	5,896
,, 1904 estimated	5,833
Total deaths registered in the district ...	99
Corrections ... Additions ...	0
,, ... Deductions ...	24

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	12·9 ...	14·8
Zymotic Death-rate	·2 ...	1·1
Infantile Mortality	115· ...	116·7
Birth-rate	19·4 ...	21·2
Cases of Infectious Disease per 1,000 population... ...	4·3 ...	6·3

The report is printed.

Physical Features, etc. The geological formation is upper chalk, covered on the higher ground with boulder clay. The elevation above the sea level varies from 150 to 400 feet. The principal industries carried on are malting, cement making, and the manufacture of clothing. The rateable value is £24,206.

House Accommodation. This is fairly adequate. There is a sufficiency of open space around most of the houses. Supervision is exercised over the erection of all new houses, the model bye-laws for new buildings being in force. Three cases of overcrowding were dealt with during the year.

Sewerage and Drainage. The discrepancy in level at the outfall works under the proposed new scheme of sewerage, referred to in last year's report, has now been rectified, and an amended scheme prepared. Arrangements are now being made for the acquisition of the necessary land. When these are completed the Local Government Board are prepared to sanction a loan of £18,600 for sewerage and sewage disposal works.

Excrement Disposal. Most of the houses are drained into the existing sewerage system, but there are still a few earth

closets and privies. These will be done away with as soon as the proposed new sewers are provided.

House Refuse has, for the past five years, been removed by the Council's scavengers once a week by the method known as the "D" card system, and with beneficial results.

Water Supply is entirely derived from the deep well (350ft.) in the chalk. The hardness is reduced about one half by a softening process. About 20 gallons per head per day are supplied. A scheme has been prepared for supplying the elevated hamlet of Seward's End by pumping.

Records of rainfall, and of rest level of water in the well are supplied.

Supervised Premises. There are no lodginghouses in the district. The 5 slaughterhouses, 14 cowsheds, and 16 dairies and milkshops have been inspected and found fairly satisfactory. Regulations under the Cowsheds, Dairies, and Milkshops Order are in force.

Factory and Workshop Act. A special report is furnished on the administration of this Act. The workshops (77) and workplaces in the district have been inspected during the year. The Public Health Acts Amendment Act, 1890, is in force. The 13 bakehouses on the register have all been inspected and found in order. Written intimation of the requirement as to limewashing is now sent to each occupier one month before such limewashing falls due. There are no underground bakehouses.

Little homework is carried on, the number on the two lists of outworkers received being eight. Steps are taken to prevent homework on insanitary premises.

Infectious Disease. Cases are removed to the Joint Hospital belonging to the Saffron Walden Urban and Rural District Councils. Nearly all the scarlet fever and diphtheria cases notified during the year were removed. Chicken-pox is notifiable in the district.

Statistics. These are of special interest in this district, as the records of the last 30 years are available for comparison.

SHOEBURYNESS.

Medical Officer of Health—E. W. WALTER, M.R.C.S., L.R.C.P

Area in acres, 1901 census (land and inland water) 1,036

Population, 1901 census	...	...	4,081
,, 1904 estimated	...	...	4,322
Deaths registered in the district		...	44
Corrections ...	Addition	...	1
,, ...	Deductions	...	0

	1904.	Mean for 8 years, 1896—1903.
Nett Death-rate	10·4 ...	12·2
Zymotic Death-rate	4·6 ...	2·3
Infantile Mortality	138· ..	134·
Birth-rate	31·9 ...	35·1
Cases of Infectious Disease per 1,000 population ...	3·9 ...	9·3

The report is type-written.

Physical Features, etc. The soil of the district is principally clay and gravel; the country flat, and fairly well wooded.

House Accommodation. The general condition of the houses of the working classes is satisfactory. Overcrowding becomes less as building increases.

Sewerage and Drainage. The district is drained into two main sewers, which discharge into the sea. Part of the system is supplied with automatic flushing tanks. The whole system is working satisfactorily.

Excrement Disposal. There are 681 water closets connected with the sewers, and 30 earth closets. The latter are emptied three times, and ashpits twice a week.

Water Supply. There is a constant public supply of pure water derived from an artesian well.

Supervised Premises. The sanitary condition of the dairies and cowsheds is satisfactory.

Factory and Workshop Act. Workshops and workplaces are inspected, but no register has yet been prepared. The three bakehouses are visited occasionally, and satisfy requirements.

Infectious Disease. The isolation hospital at Sutton Ford Bridge is a great advantage to the health of the district. Two cases (diphtheria) were isolated during the year.

SOUTHEND.

Medical Officer of Health—J. T. C. NASH, M.D., C.M., D.P.H.

Area in acres, 1901 census (land and inland water), 5,172

Population, 1901 census ...	...	28,857
,, 1904 estimated...	...	41,944
Deaths registered in the district	...	592
Corrections ... Additions	...	30
,, ... Deductions	...	26

	1904.		Mean for 12 years, 1892—1903.
Nett Death-rate	14·2	...	14·7
Zymotic Death-rate	2·3	...	2·1
Infantile Mortality	179·	...	146·
Birth-rate	24·0	...	26·7
Cases of Infectious Disease per 1,000 population ...	3·9	...	12·7

The report is printed.

House Accommodation. Two building inspectors are employed under the Borough Surveyor to see that the building bye-laws, which follow the model code, are complied with. The model bye-laws are discussed, and the opinion expressed that conditions as to the situation and ventilation of larders should be included.

A further loan of £2,947 has been applied for in respect of the workmen's dwellings in Ruskin Avenue, constructed by the Council.

Sewerage and Drainage. The Western Valley sewer extension has been carried as far as Butts' cesspool, and the houses in Beach Road, which formerly drained into it, thereby giving rise to constant nuisance, have been connected to the sewer. Although the extension is completed the estate owners have not yet connected with it, but steps are being taken to sewer the

roads under the Private Street Works Act. Further sewerage schemes will soon be required at the western end of the borough, where building is proceeding fast.

Surface water drains are being laid down, after Local Government Board inquiry, to relieve the town sewers, which, owing to the rapid increase of population, were being overtaxed. In consequence of representations by the Medical Officer of Health, arrangements have been introduced by means of which the first street washings are carried into the sewers.

House Refuse. An improvement in the collection is mentioned in the summary of improvements for the year, but is not elsewhere referred to. The method of disposal, on brickfields situated in the heart of All Saints' parish, is very objectionable. Flies abound and summer diarrhœa is rife in the neighbouring houses. A resolution has been passed to erect a destructor at the London Road depot, and to apply to the Local Government Board for a loan of £10,000 for this purpose.

Water Supply. This is derived from the deep wells of the Southend Water Works Company. It has throughout the year yielded uniformly satisfactory results both on chemical and on bacteriological examination. For a week or more in August the supply was intermittent, owing to the simultaneous break down of three of the Company's wells and the large consumption (50 per cent. more than the previous summer). At this time some adverse comment was occasioned by a brownish discolouration of the water, due to fine sand and clay, but the organic purity of the supply was fully maintained. The Company is pushing on with new wells to meet the demand.

Since 1901, when the then existing wells were described, three new wells, two at Fobbing and one at Vange, have come into use, and particulars of these are now given.

The Fobbing wells at present draw (hard) water from the lower tertiary deposits, but will eventually be carried down to the chalk.

Supervised Premises. Bye-laws for common lodginghouses were adopted during the year in consequence of the discovery

in March of the fact that a lodginghouse in Prittlewell came within this category.

Draft bye-laws for the regulation of rag and bone dealing were submitted to the Local Government Board and discussed with two other of their officials. Their adoption was, however, postponed in consequence of an application for a license to establish a knacker's business, which, if granted, will necessitate more extensive bye-laws as to offensive trades.

The seven registered slaughterhouses have been regularly inspected, 137 visits being made. One notice was served. The provision of a municipal abattoir is recommended, as proper inspection of all animals killed is at present impossible.

There are 4 cowsheds and 34 dairies on the register, and 68 shops other than dairies sell small quantities of milk. Numerous visits have been paid to these premises, and 24 notices served, One dairy found unsatisfactory was improved, and plans for three new dairies were submitted for approval by the Medical Officer of Health. Vigilant inspection has brought about considerable improvement in the cowsheds. In some overalls are used while milking, and the cows' udders washed. An unsatisfactory unregistered cowshed was brought to light, whereupon its use was at once discontinued.

Factory and Workshop Act. There are 107 workshops on the register, including 29 bakehouses. Besides these there are 3 factory bakehouses. Inspections made under the Act number 772, and 22 defects were found and remedied. A case of illegal occupation of an underground bakehouse was met with. This was at once discontinued. Three lists of outworkers, containing four names, were received.

Nuisances. Systematic as well as special inspection is carried out The continuance of the nuisance at the brickfield and the discontinuance of the nuisance formerly constituted by Butts' cesspool have been already referred to.

Infectious Disease. Some form of notification of phthisis is recommended. At present disinfection of premises after deaths

from phthisis is the only step taken to prevent its spread, and further preventitive measures are required.

Disinfection is effected by vaporisation of formalin tablets or by formalin spraying, and occasionally by sulphur.

The isolation hospital accommodation requires to be increased. A larger administrative block and a more adequate laundry are urgently required, and additional ward accommodation is also necessary. Plans have been prepared by the Surveyor for a new administrative block, a new ward pavilion (number of beds not stated), and an improved laundry, at an estimated cost of £8,500. New fittings for fire extinction purposes were provided during the year. A staff of matron and seven nurses is maintained.

WALTHAM HOLY CROSS.

Medical Officer of Health—J. DAMER-PRIEST, M.R.C.S., D.P.H.

Area in acres, 1901 census (land and inland water) 11,017

Population, 1901 census	6,549
,, 1904 estimated	6,730
Deaths registered in the district ...	84
Corrections ... Additions ...	8
,, ... Deductions ...	4

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	13·1 ...	13·3
Zymotic Death-rate	·7 ...	1·9
Infantile Mortality	104· ...	123·
Birth-rate	24·4 ...	27·3
Cases of Infectious Disease per 1,000 population... ...	2·5 ...	7·1

The report is printed.

House Accommodation. No progress has been made during the year in overtaking the existing deficiency in houses suitable for the working classes. Private enterprise lies dormant, and a building scheme propounded last year was rejected by the Council.

Sewerage and Drainage. The new sewage disposal plant has been in satisfactory operation throughout the year, the degree of purification obtained ranging from 83 per cent. to 91 per cent. It is found that less purification is obtained in cold weather, and it is therefore proposed to heat the sewage in the detritus tank by means of the exhaust steam from the boiler at the pumping station.

Proceedings were twice during the year taken against the Council by the Lea Conservancy for pollution of the river. In both cases the summons was dismissed.

House Refuse is removed under the supervision of the Surveyor, and no complaints have been received.

Water Supply. The public supply is abundant and of excellent quality. It is derived solely from the East London deep well in Lea Road.

Various private supplies have been analysed, and three, which were found polluted, condemned. The water supplied to Fisher's Green, being derived from cultivated land, involves risk to its consumers, who have, however, no alternative supply. They have been recommended to boil it before drinking.

Supervised Premises. Regular and careful inspection has been made at stated intervals of all dairy farms, dairies, and cowsheds in the district, and a register is kept. Some of these premises have been put into a sanitary condition, but in other cases the owners and occupiers will not recognise the importance of doing so. The slaughterhouses are kept clean.

Factory and Workshop Act. There are 5 factories and 39 workshops on the register. Nuisances under the Public Health Acts were discovered in 23 instances, 17 being remedied, but no offences under this Act were met with. No lists of outworkers were received. All the above premises were inspected during the year.

Infectious Disease. Measles, German measles, and chickenpox are compulsorily notifiable, and the voluntary notification of phthisis was commenced in April, seven practitioners signifying their willingness to notify. Eleven notifications

were received. Cards have been placed in every hotel and public house in the district, and a pamphlet describing simply the method of spread of the disease, precautions to be taken, &c., is left at each infected house. Bacteriological diagnosis is gratuitous.

The isolation hospital of the Waltham Joint Hospital Board (Buckhurst Hill, Chingford, and this district) was commenced in November, and should be completed at the end of next November. A ground plan of the buildings is appended. They include an administrative and two ward blocks, an observation block, and a mortuary and a laundry block. No other particulars are given.

The temporary small-pox hospital will now no longer be available.

Disinfection is still by means of formalin.

WALTHAMSTOW.

Medical Officer of Health—J. J. CLARKE, L.R.C.P.I., D.P.H.

Area in acres, 1901 census (land and inland water) 4,343

Population, 1901 census	95,131
,, 1904 estimated ...	111,282
Deaths registered in the district ...	1,175
Corrections ... Additions ...	168
,, .. Deductions ...	13

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	12·0 ...	13·7
Zymotic Death-rate	2·9 ...	2·6
Infantile Mortality	136· ...	140·
Birth-rate	32·8 ...	33·1
Cases of Infectious Disease per 1,000 population ...	8·8 ...	11·1

The report is printed, and includes a report by the chief Sanitary Inspector.

Physical Features, etc. The subsoil is mainly gravel, but the London clay reaches the surface in various localities,

notably Church Hill. Two small streams, the Ching and the Dagenham brook, drain the district into the river Lea.

House Accommodation. The district is inhabited mainly by the working classes. The house accommodation already provided by private enterprise is ample and good. It is possible that houses with fewer and larger rooms than the ordinary six-roomed cottage might be erected in the outskirts and serve the needs of many. By the aid of the new electric trams the present congestion around the stations might then be relieved.

A committee formed to take action under the Housing of the Working Classes Act, Part III., has met on several occasions during the year, with no tangible result.

Sewerage and Drainage. The whole district has a duplicate system of sewers. Sewage is disposed of on a farm of 162 acres in extent, after preliminary chemical precipitation. Every care has been exercised in the treatment, and a large amount of underdraining has been carried out at the farm. Notwithstanding this, proceedings have been instituted against the Council by the Lea Conservancy Board for polluting the Dagenham brook, and complaint has been received from the West Ham Corporation of pollution of the Channelsea river.

No complaints have been received during the year of smells in connection with the sewage disposal, and the sewers proved adequate for the needs of the district. A number of new surface water drains have been constructed, and the ventilating shafts now number 51.

The work of drain re-construction tends on the whole to decrease in consequence of the great number dealt with in the last ten years, and the close supervision now exercised over the drainage of new buildings.

It is recommended that the example of West (and East) Ham should be followed by obtaining the legal definition of all private combined drains, whether the houses belong to one or more than one owner as drains, repairable at the owners' expense.

Excrement Disposal. Practically every house has water closet accommodation. Soil pipe ventilators (which in Walthamstow act as drain ventilators in most cases) are often constructed of very perishable material, and power is required under the bye-laws to prevent this.

House Refuse. Dust is systematically removed twice, and in some cases three times a week. The new bye-law providing for suitable metal dust-bins is largely honoured in the breach, and its enforcement is now advised. The destructor is nearing completion, and will soon be in operation. Street scavenging is well done.

Water Supply. Systematic monthly analyses have been made throughout the year of the water supplied by the Metropolitan Water Board. These analyses (15 chemical and 5 bacteriological) showed an improvement in quality over the previous year, and the supply was good and constant.

The position in which cisterns are placed in new houses is often unsatisfactory. They are frequently inaccessible and uncovered. Power should be obtained to remedy this.

Supervised Premises. Fifteen cowsheds and 102 milk sellers are licensed, and are regularly visited. The cows and sheds are generally kept in a good condition. The model regulations have been adopted and are enforced. A list is given of defects remedied, 22 in all.

There are 12 licensed slaughterhouses in the district. All are kept in good condition.

There are two offensive trades (fat boiling), both in the Northern Ward. No complaints of nuisance arising from them have been received. They require careful watching, owing to the number of pigs kept, but the fat boiling causes little nuisance. An application for license to establish a gut scraping business was refused, on the advice of the Medical Officer of Health.

Factory and Workshop Act. This Act is fully reported upon. There are 147 workshops on the register, including 51 bakehouses and 49 laundries. All have been inspected. The

laundries are generally well kept. Twenty defects were found and remedied in them. The bakehouses are generally in very good condition and well kept. Defects have been remedied in 18 instances. The six underground bakehouses are now quite satisfactory. Lists of outworkers (126, containing 753 names) are sent in in a very irregular manner, many with wrong addresses. Notices have been served upon the employers pointing out the penalties to which such irregularities render them liable, and the determination of the Council to enforce them.

The outworkers' premises are generally in a very satisfactory condition. 753 inspections of these were made.

A "Register of Workshops" and "Workshop Record Book" have been kept fairly well up to date, and a further "Record of Outworkers," as per lists received, has been kept on the card index system.

Regulations as to means of escape from factories in case of fire have been approved of.

Nuisances, etc. A list of streets is given (18) in which house-to-house inspection has been carried out.

A conviction was obtained against a carman for causing a nuisance by the removal of fish offal during the busy hours of the day. Arrangements were then made for removal about 2 a.m.

Infectious Disease. On receipt of each notification the premises are visited and the usual information obtained as to possible sources of infection.

The voluntary notification of phthisis is advised, also the provision of gratuitous bacteriological examination of suspected cases. At present the only measure adopted is disinfection of rooms after deaths from phthisis.

Handbills are distributed to householders when hospital accommodation is not available. Head teachers are notified of children attending school from infected houses, and such children are excluded.

Disinfection is thoroughly carried out, but it is most difficult to get parents to give up every article of infected clothing for removal, and to this fact the return cases which occur are, in part, attributed. 7,997 articles were disinfected during the year. All disinfection is now carried out by the Council's employees.

Isolation hospital accommodation is not nearly sufficient for the needs of the district, and much heartburning was caused by the necessary refusal of many scarlet fever cases. The enlargement of the hospital (36 new beds, with extension of administrative block, at an estimated cost of £10,000) is now in progress. The plan of this extension is novel, providing as it does a separate room for each patient in the acute stage of his illness. When completed it will provide ample accommodation for present needs, and a hospital second to none in the kingdom.

WALTON-ON-THE-NAZE.

Medical Officer of Health—J. W. COOK, M.D.

Area in acres, 1901 census (land and inland water) 2,065

Population, 1901 census 2,014

,, 1904 estimated 2,089

Total deaths registered in the district... 22

Corrections ... Addition ... 1

,, ... Deductions... 0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	11·0* ...	15·6
Zymotic Death-rate	0· ...	1·8
Infantile Mortality	47· ...	116·
Birth-rate	20·6 ...	25·0
Cases of Infectious Disease per 1,000 population ...	2·3 ...	4·6

The report is type-written.

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*The Medical Officer of Health, by deducting three deaths of visitors, obtains a nett death-rate of 9·09.

Physical Features, etc. The town is situated on a narrow neck of land connecting The Naze—the eastern extremity of Essex—with the mainland. It has an eastern exposure, and the soil is mainly heavy clay.

House Accommodation. The rents of the newer houses are high for working men, but this can be compensated for by the profit derived from summer visitors. The number of old cottages is diminishing. Building bye-laws are enforced.

Sewerage and Drainage. The town is well sewered, a new system having been recently laid down. The sewage passes through a septic tank and then a receiving tank before its discharge into the sea. Some complaints of odour from the septic tank arose during the summer. The difficulty has been overcome by various alterations to the ventilating opening into the tanks.

Excrement Disposal is entirely by water carriage. The w.c.'s are of modern type and well flushed, and receive a good deal of attention.

House Refuse. Most of the houses are provided with portable dustbins. Removal is effected by the Council's own men weekly, and oftener in the summer.

Water Supply is ample and of good quality. It is derived from the deep wells of the Tendring Hundred Water Co. at Mistley.

Supervised Premises. The slaughterhouses, cowsheds, and milkshops are periodically inspected and are fairly clean. Bye-laws for houses let in lodgings are required.

Factory and Workshop Act. There are three bakehouses, one recently opened; all are satisfactory. The one underground bakehouse was closed last year, a certificate under the Act being refused. Several workshops have been inspected.

Infectious Disease. Isolation is still a difficulty, there being no hospital, but an arrangement with a neighbouring district to receive Walton patients is in contemplation.

House disinfection is carried out with formalin, by spray and fumigation.

WANSTEAD.

Medical Officer of Health—F. ARGLES, M.R.C.P., ED. ; M.R.C.S.

Area in acres, 1901 census (land and inland water) 1,679

Population, 1901 census	...	...	8,303*
,, 1904 estimated ...		...	9,550*
Deaths registered in the district		..	85
Corrections	...	Additions ...	7
,,	...	Deductions...	3

	1904.		Mean for 13 years, 1891—1903.
Nett Death-rate	9·3	...	10·6
Zymotic Death-rate	1·3	...	1·1
Infantile Mortality	94·	...	97·
Birth-rate	21·3	...	20·5
Cases of Infectious Disease per 1,000 population	5·0	...	8·6

The report is printed.

House Refuse is collected weekly by a contractor.

Water Supply is derived from the Metropolitan Water Board, East London District, and is quite satisfactory.

Factory and Workshop Act. The premises coming under this heading have been periodically inspected ; all were in good sanitary condition.

Infectious Disease. Rooms and clothing in 23 houses were disinfected, and all bedding, woollen goods, &c., disinfected afterwards in the steam disinfector.

The hospital was inspected in November by one of the Local Government Board Inspectors, Dr. Buchanan, and an inquiry was held by him to consider the advisability of recommending the formation of a Joint Hospital Board for Wanstead and Woodford. The question has not yet been decided

*These figures are exclusive of the (895) inmates of the Royal Merchant Seamen's Asylum and the Infant Orphan Asylum.

WITHAM.

Medical Officer of Health—K. C. GIMSON, M.B., B.CH.

Area in acres, 1901 census (land and inland water) 3,706

Population, 1901 census	3,454
,, 1904 estimated	3,520
Deaths registered in the district ...	52
Corrections ... Additions ...	0
,, ... Deductions ...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·8 ...	13·1
Zymotic Death-rate	·6 ...	·9
Infantile Mortality	59· ...	109·
Birth-rate	24·1 ...	22·6
Cases of Infectious Disease per 1,000 population ...	4·8 ...	5·1

The report is in manuscript.

Sewerage and Drainage. The arrangements are satisfactory. Sewage disposal is by means of a sewage farm.

House Refuse is removed by the Council's carts as occasion arises, and disposed of on the sewage farm.

Water Supply. The new supply has been found defective, owing to sand running in through the chalk. The bore holes are now being lined with tubes to a greater depth to prevent this.

Supervised Premises. The slaughterhouses are quite satisfactory.

Factory and Workshop Act. The bakehouses are quite satisfactory. Nine other workshops were inspected. No defects were met with. No lists of outworkers were received. No register of workshops is kept.

Infectious Disease. The need for an isolation hospital is again referred to. Great difficulty was experienced in treating some of the scarlet fever cases properly in their own homes.

WIVENHOE.

Medical Officer of Health—G. PENDER-SMITH, L.S.A.

Area in acres, 1901 census (land and inland water) 1,564

Population, 1901 census	2,560
,, 1904 estimated	2,500
Deaths registered in the district ...	27
Corrections ... Additions ...	0
,, ... Deductions...	0

	1904.	Mean for 6 years, 1898—1903.
Nett Death-rate	10·8 ...	12·5
Zymotic Death-rate	0· ...	1·2
Infantile Mortality	102· ...	84·
Birth-rate	19·6 ...	23·1
Cases of Infectious Disease per 1,000 population ...	7·2 ...	7·8

The report is printed.

Sewerage and Drainage. Sewage disposal is carried on as explained in previous reports by the Council, and is very satisfactory. Scavenging (including emptying of pail closets and cesspits) is undertaken. No complaint has lately been received as to any unpleasant smell from the river.

Water Supply. Some of the houses are not yet connected with the Council's mains, shallow wells being used, though the water is of doubtful quality. Samples from these should be analysed with a view to their closure, if required.

Supervised Premises and Factory and Workshop Act. The bakehouses, dairies, slaughterhouse, and houses under the Factory and Workshop Act have been visited from time to time. They were found satisfactory.

Infectious Disease. All houses in which infectious diseases and cases of phthisis occurred were thoroughly disinfected.

There is no isolation hospital in the district. An arrangement has been made with Colchester to isolate any case requiring removal.

WOODFORD.

Medical Officer of Health—W. G. GROVES, M.R.C.S.

Area in acres, 1901 census (land and inland water) 2,161

Population, 1901 census 13,798

,, 1904 estimated... ... 14,699

Deaths registered in the district ... 165

Corrections ... Additions ... 7

,, ... Deductions ... 2

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	11·6	... 11·6
Zymotic Death-rate	1·6	... 1·3
Infantile Mortality	129·5	... 124·
Birth-rate	28·4	... 26·0
Cases of Infectious Disease per 1,000 population ...	5·5	... 7·4

The report is printed.

Physical Features, etc. Woodford stands on rather high ground between the rivers Lea and Roding. Its lowest part is very liable to flooding, but this did not occur last year. The soil is mostly a stiff clay.

Sewerage and Drainage. There are two main systems, the eastern, by far the larger, and the western. The eastern works have been altered and enlarged during the year, and are now in working order. They have been planned on a scale calculated to meet requirements for many years. At both works the system is bacteriological, the effluent flowing over land before being finally discharged.

House Refuse. Dust is collected weekly by a contractor, and on the whole the system works satisfactorily. Complaints are made from time to time, but are often frivolous.

Water Supply. This is continuous and of first-rate quality.

Factory and Workshop Act. There are 33 workshops, including 8 bakehouses, and 3 workplaces on the register. These were inspected on 92 occasions, and 8 defects found and remedied. One matter was referred to the Sanitary Authority

by H.M. Inspector and dealt with, and one outworker's name was received.

Nuisances. One of the stagnant ponds previously referred to as injurious to health has been filled up. Two others are on Forest ground, and the Conservators, being only trustees and not owners, cannot be compelled to fill them up.

Infectious Disease. The section of the report dealing with this subject gives a very complete account of the system adopted for dealing with infectious disease. The following steps are taken on notification.

1. Immediate visit by Medical Officer of Health or Sanitary Inspector. Removal of cases of scarlet fever and diphtheria which cannot be efficiently isolated at home. Distribution of printed instructions and disinfectants.

2. Examination of drains and notice to remedy defects where found.

3. Disinfection of rooms by sulphur and formalin after removal or recovery of patient. All bedding, &c., is either washed or disinfected by steam.

4. Notification of all cases of scarlet fever and diphtheria to the educational authority in order to secure the exclusion of "contacts" from school.

5. Isolation of small-pox cases in the West Ham Small-pox Hospital at Dagenham.

6. In cases of suspected diphtheria fees are paid both for the inoculation of swabs and for their examination. Swabs are also supplied for examination of convalescents. Antitoxin is supplied to qualified medical men for prophylactic use.

The question of isolation hospital accommodation still remains in a state of uncertainty. The agreement with Wanstead Urban District Council terminated on March 25th, 1905. A Local Government Board inquiry was held on Nov. 30th, to consider the advisability of forming a Joint Hospital Board for the two districts, and pending the Board's decision nothing is being done in the matter.

III. RURAL DISTRICTS.

BELCHAMP.

Medical Officer of Health—J. SINCLAIR HOLDEN, M.D.

Area in acres, 1901 census (land and inland water) 26,500

Population, 1901 census ...	...	4,847
,, 1904 estimated	...	4,847
Deaths registered in the district	...	69
Corrections ... Additions	...	8
,, ... Deductions	...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	15·9 ...	15·5
Zymotic Death-rate	1·65 ...	·8
Infantile Mortality	152·9 ...	103·
Birth-rate	17·5 ...	20·3
Cases of Infectious Disease per 1,000 population ...	3·5 ...	7·0

The report is printed.

Physical Features. The geological formation of the district is chalk, covered on the higher ground with boulder clay, and in the valleys with drift sand and gravel or brick earth; superficially with alluvium.

House Accommodation. Three houses have been condemned as unfit for human habitation and pulled down. Two cases of overcrowding were discovered, and these have been remedied by the tenants moving into larger houses.

Sewerage and Drainage. Eighteen new or improved drains have been provided, and twenty ditches into which sewage enters have been cleansed. The Foxearth ditch, connected with the the brewery, was cleaned out. The smell from it was at times more noticeable than the previous year.

Excrement Disposal. The privy-cesspool system is in general use. Most cottages have ground available for sewage disposal.

Factory and Workshop Act. There are no factories in the district, and no employers of outworkers nor outworkers employed elsewhere. The 52 workshops registered, including 16 bakehouses, have been inspected, and any sanitary defects found have been remedied.

Nuisances. Inspection has been carried out in each parish during the year, both systematic and special when required. Legal proceedings were taken in one case, regarding some cottage drains, and a conviction obtained.

Isolation Hospital. No further steps with respect to the provision of a hospital are recorded.

BILLERICAY.

Medical Officer of Health—FRED CARTER, M.D.

Area in acres, 1901 census (land and inland water) 49,391

Population, 1901 census 15,192

,, 1904 estimated ... 15,192

(Excluding Asylum and Barracks; including Workhouse)

Total deaths registered in the district 433

Corrections ... Additions ... 0

,, ... Deductions ... 266

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	11·0	14·5
Zymotic Death-rate	·7	1·2
Infantile Mortality	99·	97·
Birth-rate	23·2	27·0
Cases of Infectious Disease per 1,000 population ...	4·8	6·9

The report is printed.

House Accommodation. Suitable cottages for labourers with large families are hard to get, and there is consequently a difficulty in enforcing orders for the abatement of overcrowd-

ing. Alterations in the building bye-laws, which await the sanction of the Local Government Board, would permit the erection of timber cottages. It is computed that a good cottage could be built in this way for £150 instead of the £250 necessary under the present bye-laws.

Sewerage and Drainage. The sewer for Warley Peninsula, the Asylum, and Brook Street, and its outfall works at Putwell Bridge, have been completed. The works comprise a detritus chamber, two open tanks, three bacteria beds, and 2½ acres of land available for treatment.

The sewer in Priest's Lane, Shenfield, has been extended to join the Shenfield and Brentwood and the Shenfield and Hutton sewers at its two extremities.

A sewage system for Billericay, with an outfall near Gooseberry Green, is proposed. A provisional order has been applied for and a Local Government Board inquiry held.

The contract for the Wickford sewerage scheme has been accepted, and the work will shortly be in hand.

Supervised Premises. There are no lodginghouses in the district. The 14 dairies and milkshops and 35 cowsheds have been regularly inspected. The former are usually well kept, but there is room for improvement in the latter.

Factory and Workshop Act. The workshops (15) and bakehouses have been regularly inspected.

Labour Colony at Laindon. This was opened in July, on land belonging to Mr. Fels, and leased by him to the Poplar Guardians for three years at a peppercorn rent. Accommodation is provided for 150 men, but is hardly sufficient, more day room being required, a larger kitchen and scullery, and a larger laundry. Some difficulty was experienced in obtaining an adequate water supply. A reservoir for surface water has now been constructed. The Colony is well conducted.

BRAINTREE.

Medical Officer of Health—L. P. BLACK, M.A., M.B., B.C., D.P.H.

Area in acres, 1901 census (land and inland water) 62,355

Population, 1901 census ...	...	18,109
,, 1904 estimated	...	18,106
Deaths registered in the district	...	261
Corrections ... Additions	...	0
,, ... Deductions	...	14

	1904.		Mean for 13 years, 1891—1903.
Nett Death-rate	13·6	...	14·8
Zymotic Death-rate	·5	...	·9
Infantile Mortality	87·	...	93·
Birth-rate	20·9	...	21·7
Cases of Infectious Disease per 1,000 population ...	4·7	...	5·5

The report is printed.

Sewerage and Drainage. All the sewer ditches in the district are cleaned out as often as required, some three times and others twice a year. Night soil is removed in carts at the public expense in Coggeshall and parts of Bocking. Trapped have been substituted for untrapped road gullies, at the joint expense of the local and of the County Council, in Hatfield Peverel, Finchingfield, and Bocking.

Supervised Premises. Twenty slaughterhouses, 30 dairies and milkshops, and 60 cowsheds, were inspected. No reference is made to their condition.

Factory and Workshop Act. Eight factories, 15 workshops, 46 bakehouses, and 200—300 home workers' premises were inspected, the only defect found being one case of overcrowding. Two list of outworkers, containing 64 names, were received. No registers or other books are kept.

Nuisances. Systematic inspections were made at various times by the Chief Inspector and the Medical Officer of Health. Twelve schools were inspected, and suggestions for improvement in sanitary matters made to the managers.

Infectious Disease. Disinfection of rooms is occasionally carried out after deaths from phthisis. The extension of this practice is advocated, and a system of voluntary notification suggested.

A wooden small-pox hospital of 18 beds has been provided for Braintree Urban and Rural Districts, at a cost of between £500 and £600. A charge is now made for treatment at the general Isolation Hospital, and the discontinuance of this practice is advocated.

BUMPSTEAD.

Medical Officer of Health—W. ARMISTEAD, M.B.

Area in acres, 1901 census (including inland water 18 acres) 11,874

Population, 1901 census 2,541

„ 1904 estimated 2,437

Deaths registered in the district ... 43

Corrections ... Additions ... 4

„ ... Deductions ... 0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	19·3 ...	14·5
Zymotic Death-rate	1·2 ...	1·3
Infantile Mortality	140· ...	105·
Birth-rate	23·4 ...	24·6
Cases of Infectious Disease per 1,000 population ...	6·2 ...	8·1

The report is printed.

Physical Features, &c. The geological formation of the district is chalk, covered on the higher ground with boulder clay, and in the valleys with gravel and alluvium. Most of the inhabitants are engaged in agriculture. The rateable value is £11,366.

House Accommodation in most parts of the district is fairly adequate, but many of the bedrooms are small and without fireplaces, and some of the old cottages are barely fit for

habitation. There is a sufficiency of open space about most of the houses and cleanliness of surroundings is enforced as far as possible. There are no building bye-laws.

Sewerage and Drainage. Except at Birdbrook and Steeple Bumpstead there are no sewers. Most of the cottages have large gardens, on which the slop water can be disposed of, and some of the larger houses have cesspools.

Excrement Disposal. Some of the larger houses have water closets connected with cesspools; the cottages have cesspit privies or pail closets. Where defects are found in the old cesspit privies they are either converted into pail closets or the old cesspit is re-placed by a new one built with brickwork in cement.

House Refuse is disposed of by the occupiers on their gardens. No public scavengers are employed.

Water Supply. The best water in the district is derived from the chalk. This supply is sufficient and, when properly protected, wholesome. After the drought in autumn many of the ponds were dried up. The supply at Helions Bumpstead has been improved by cleaning out the pond, and that at Church Field, Ashen, by the provision of 16 yards piping and a shingle filter. The weeds in the ponds at White's Farm and Jacob's Farm, Helions Bumpstead, have been cut down, and the filter beds at White's Farm cleaned out. Four public pumps have been repaired.

Supervised Premises. There are no lodging houses. The slaughterhouses (2), dairies (12), and cowsheds (15) have been inspected.

Factory and Workshop Act. A special report on the administration of this Act is appended. The workshops (40) and workplaces have been inspected, and certain sanitary defects dealt with. There are eight bakehouses on the register, none of them underground. They conform to the requirements of the Act.

A large amount of homework is done in the district. Several nuisances have been abated on premises where it is carried

out, and at two houses where diphtheria occurred homework was prohibited till after disinfection. Lists of outworkers (employed by a clothing firm) containing 106 names altogether, have been received from the Haverhill Urban District Council.

CHELMSFORD.

Medical Officer of Health—JOHN C. THRESH, M.D., D.SC.

Area in acres, 1901 census (land and inland water) 83,849

Population, 1901 census	23,717
,, 1904 estimated... ...	23,920
Deaths registered in the district ...	282
Corrections ... Additions ...	34
,, ... Deductions ...	2

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	13·1 ...	14·3
Zymotic Death-rate	·7 ...	1·1
Infantile Mortality	86· ...	92·
Birth-rate	22·3 ...	23·9
Cases of Infectious Disease per 1,000 population ...	2·9 ...	7·2

The report is printed and includes the record of a special investigation into the housing question.

Physical Features, &c. The district is undulating in character and includes no dense centres of population. Much of it is situated on the London clay.

House Accommodation. A Committee of the Council was appointed in May last to consider the whole question of the housing of the working classes. They have awaited this report before meeting. The report classifies the parishes into groups containing under 4, 4—4·25, 4·25—4·5, and over 4·5 persons per house, but points out that the number of persons per house is not necessarily an index of the extent of overcrowding since the size and condition of the houses are also important factors. It has been found desirable, therefore, to consider each parish

separately, with especial reference to the prevalence of overcrowding, the number of cottages with three bedrooms, and the general condition and sufficiency of the existing accommodation. Great differences are shown to exist between the various parishes. In some the accommodation is adequate, especially in the neighbourhood of the Borough of Chelmsford, and in some great deficiency exists, resulting in objectionable social overcrowding. Assuming that more than three occupants overcrowd every 2-roomed house, more than four every 3-roomed, and more than six every 4-roomed, 266 of the total of 5,564 tenements in the district at the 1901 census were overcrowded.

It is recommended that the Council should provide a few xperimental cottages under the new and less stringent building bye-laws. The rents should not be expected to cover the annual instalments of principal and interest, but assuming a deficiency of £2 per cottage it is pointed out that for £1,000 per annum 500 cottages might be provided, and that they would well re-pay this expenditure.

Sewerage and Drainage. The sewage field at Ingatestone requires constant attention, to secure a satisfactory effluent. The Writtle works produce no effluent, the sewage being completely absorbed by the land. The small filtration beds at Great Waltham do little except prevent solid matter entering the river. This suffices, however, to prevent nuisance.

In various instances where houses drained into ditches great improvement has been effected by doing away with the drains and substituting disposal of slop water on the gardens. Many cottages unfortunately have insufficient land for this purpose.

Excrement Disposal is mainly by the water carriage system in Widford, Springfield, and Baddow. The majority of the closets are hand flushed, but a proper water supply is insisted on in all new cottages. The pail closets in the more populous parts of Writtle, Broomfield, and the Walthams are scavenged

by contractors for a fixed annual sum. In the strictly rural parishes the number of pail closets is increasing, and that of privy cesspits decreasing.

House Refuse. At Springfield and Great Baddow this is removed weekly by a contractor. A properly covered cart and moveable dustbins are in use. Removal elsewhere is effected by the tenants, and the bye-laws with reference thereto are fairly complied with.

Supervised Premises. Dairies and cowsheds are frequently inspected and are being slowly improved. The regulations are at present being revised. The slaughterhouses are mostly built of wood and are difficult to keep sweet and clean. The bye-laws as to receptacles and removal of filth from slaughter-houses are often neglected. Offensive trades have given rise tono complaint.

Factory and Workshop Act. Systematic inspection is carried out. The bakehouses generally have been much improved.

Nuisances. Those chiefly met with are, want of paving at rear of cottages, defective privy cesspits and improper disposal of refuse. Two hundred pea pickers were employed at Sandon in the summer, the great majority coming from a distance and sleeping in the open-air. They constitute an intolerable nuisance, which will have to be dealt with.

Infectious Disease. Every notified case is promptly visited, aud the question of its removal to hospital or isolation at home decided according to the circumstances. If nursed at home frequent visits are paid to insure proper isolation.

Disinfection is by formalin spray, followed by sulphur. Dilute cyllin has been experimented with, and will probably be substituted for formalin in future.

The Isolation Hospital belongs to a Joint Board, formed over a year ago. The accommodation is to be increased by an additional ward block.

DUNMOW.

Medical Officer of Health—EDMUND E. GOODBODY, M.D

Area in acres, 1901 census (land and inland water) 73,503

Population, 1901 census	15,705
,, 1904 estimated ...	15,440
Deaths registered in the district ...	242
Corrections ... Addition ...	1
,, ... Deductions...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	15·7 ...	15·9
Zymotic Death-rate	·9 ...	·9
Infantile Mortality	97. ...	86·
Birth-rate	22·0 ...	23·2
Cases of Infectious Disease per 1,000 population ...	5·4 ...	5·3

The report is printed.

General Character and Physical Features. The district includes 25 parishes, many containing a large village or small town. The bulk of the inhabitants are engaged in agriculture, and there is little shifting of population. Labourers are now fairly well paid, and can support their families in comfort.

The N.E. portion of the district lies in the catchment basin of the Blackwater, and some parishes are in the valley of the Thames.

House Accommodation. This is poor in some parishes, but in many the labourers are well housed and are often provided with a considerable plot of land as well. Rents are very low.

Sewerage and Drainage. The following towns and villages have sewers, all discharging into streams or ditches :—Great Dunmow, Takely, Great Easton, Hatfield Great Oak, High Easter, Felstead, Stebbing, Great Bardfield, and Thaxted. These have been inspected during the year and found to be in good order and repair, but some are faulty in construction.

Excrement Disposal. Privies, earth closets, and "bumbies" are general.

House Refuse. There is no system for removal of house refuse in operation.

Factory and Workshop Act. There are 61 workshops on the register, including 32 bakehouses Two lists of out-workers, containing four names, were received. Defects were found, and remedied, in the case of two workshops.

Infectious Disease. Disinfection of houses infected with phthisis, and payment for treatment of certain cases out of the rates, are advocated. Diphtheria antitoxin is supplied by the Council, and the suggestion is made that bacteriological examination of suspected cases should also be paid for by them.

EPPING.

Medical Officer of Health—TREVOR FOWLER, L.R.C.P. AND S.I., D.P.H.

Area in acres, 1901 census (land and inland water) 39,055.

Population, 1901 census	12,783
,, 1904 estimated ...	12,782
Deaths registered in the district ...	170
Corrections ... Additions...	11
,, ... Deductions...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·2 ...	13·6
Zymotic Death-rate	1·2 ...	1·3
Infantile Mortality	124· ...	101·
Birth-rate	24·6 ...	24·4
Cases of Infectious Disease per 1,000 population ...	6·2 ...	5·7

The report is printed.

Physical Features, etc. The London clay underlies the whole district, overlaid in the southern and central parts by marl and loam, and in the north for the most part by gravel and sand. The district is more or less undulating, but some parts are damp and subject to fogs. The inhabitants are mostly

engaged in agriculture, dairy farming being extensively pursued in the southern part of the district.

Sewerage and Drainage. Public sewerage is still required in certain parts of the district, especially the villages of Potter Street and Roydon. Plans for Roydon have been prepared, but there is a difficulty in providing a suitable outfall. The Potter Street sewage will probably have to be taken to the Harlow outfall, where a better system of disposal is urgently required. A number of cesspools have been filled up and numerous drains diverted from the ditches and water-courses into which they previously emptied. House drainage also has been improved.

Excrement Disposal. A number of middens and cesspools have been replaced by pail-closets, and a proper water supply provided for some of the w.c.'s previously deficient in this respect. Many closets, however, are still hand-flushed.

House Refuse. Periodical collection of refuse is urgently required at Chigwell, where numerous newly-built houses are unprovided with any receptacles for refuse. This village was specially inspected and reported upon in consequence of an outbreak of diphtheria, and attention was drawn to this matter in the special report.

Supervised Premises. The cowsheds and slaughterhouses have been inspected, and, where necessary, the owners have been required to limewash and improve them.

Factory and Workshop Act. There are 36 workshops, including 17 bakehouses, on the register. Twenty inspections were made of these premises during the year, but no sanitary defects were met with. No home workers are employed in the district.

Nuisances. Systematic and special inspections of the different parts of the district have been made, and, as a rule, the sanitary conditions found have been satisfactory. Special inspections were made of Roydon, Chigwell, and part of Harlow, and their results embodied in special reports.

Infectious Disease. School closure was much resorted to for whooping cough, measles, chicken-pox, and mumps. This step was taken in every instance on the initiative of the Managers, as a consequence of reduced attendance and resulting loss of grant. Closure was never resorted to except where advisable in the interests of public health, but the tendency of School Managers to regard this step as a means of protecting themselves against pecuinary loss is deprecated.

HALSTEAD No. 1.

Medical Officer of Health—J. H. ASHWORTH, M.D.

Area in acres	18,072
Population, 1901 census	4,481
,, 1904 estimated	4,593
Total deaths registered in the district...	40
Corrections ... Additions ..	7
,, ... Deductions ..	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	10·2 ...	13·5
Zymotic Death-rate	·2 ..	·6
Infantile Mortality	71· ...	98·
Birth-rate	21·6 ...	21·4
Cases of Infectious Disease per 1,000 population ...	1·5 ...	5·3

The report is printed.

Sewerage and Drainage. The County Medical Officer of Health has, by request of the Council, inspected and reported upon the drainage of Earls Colne.

Supervised Premises. All the registered slaughterhouses, cowsheds, dairies and milkshops have been inspected and found satisfactory.

Factory and Workshop Act. The bakehouses and workshops have been inspected, and are satisfactory.

Local Government Board Inspection. The Board sent down a medical Inspector in November to inquire into the sanitary condition of the district. His report has not yet been received.

HALSTEAD No. 2.

Medical Officer of Health—J. B. BROMLEY, M.R.C.S.

Area in acres	20,518
Population, 1901 census	5,695
,, 1904 estimated	5,695
Deaths registered in the district .	82
Corrections ... Additions ...	11
,, ... Deductions ...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	16·3 ...	14·3
Zymotic Death-rate	·2 ..	·6
Infantile Mortality	104·8 ...	87·
Birth-rate	18·4 ...	23·7
Cases of Infectious Disease per 1,000 population ...	6·1 ...	4·9

The report is printed.

House Accommodation. One house in Sible Hedingham was reported as unfit for habitation, but is now being repaired.

Sewerage and Drainage. A new bacterial tank and filter bed are about to be constructed for Church Street, Sible Hedingham.

Supervised Premises. The slaughterhouses, dairies, and cowsheds have been inspected and found satisfactory.

Factory and Workshop Act. All factories, workshops, and workplaces have been inspected. The sanitary arrangements of some are unsatisfactory, but will shortly be improved. The bakehouses have been inspected and are in good condition.

The district was inspected in November by Dr. Fletcher, from the Local Government Board, but his report has not yet been received.

LEXDEN AND WINSTREE.

Medical Officer of Health—J. W. COOK, M.D.

Area in acres, 1901 census (land and inland water) 69,485

Population, 1901 census ...		...	18,586
,, 1904 estimated...		...	19,165
Deaths registered in the district		...	254
Corrections ...	Additions ...		0
,, ...	Deductions ...		4

	1904.		Mean for 13 years, 1891—1903.
Nett Death-rate	13·0	...	14·0
Zymotic Death-rate	·9	...	1·2
Infantile Mortality	103·	...	91·
Birth-rate	23·3	...	24·5
Cases of Infectious Disease per 1,000 population ...	5·1	...	5·8

The report is type-written.

House Accommodation. Good cottages for the working classes are increasing in number, but many of the old and inferior type still remain. The building bye-laws in force are administered by a committee, whose meetings the Medical Officer of Health is not permitted to attend. These bye-laws are far from stringent, but nevertheless their application is waived in particular instances and cottages allowed to be built without any drainage whatever.

Sewerage and Drainage. No new sewers have been constructed during the year. Sewers are required in several parts of the district.

Excrement Disposal. Pail closets are now largely used all over the district, but generally without the application of dry earth or ashes, so that they are often quite as great a nuisance as the old-fashioned privy. Disposal is contracted for at Rowhedge and West Mersea, while at Dedham a contractor empties the catchpits on the line of sewer.

House Refuse. Except at West Mersea and Rowhedge removal is by the occupier. The number of portable dustbins

has increased, and that of objectionable brick ash-bins diminished.

Supervised Premises. The 15 slaughterhouses are frequently inspected and are generally found satisfactory. No systematic inspection of dairies, cowsheds and milkshops is carried out.

Factory and Workshop Act. The 28 bakehouses are generally found in good order, but are not limewashed regularly. Mention is made of but one other workshop in the district. Lists of outworkers, containing 1,184 names in all, have been received from the Colchester Borough Council. Considerable attention is given to the dwellings of these workers, and all materials found on the premises are disinfected whenever any infectious disease occurs.

Nuisances. Systematic and special inspection is carried out by the Medical Officer of Health, and the Inspector receives his assistance in the abatement of nuisances when necessary.

Infectious Disease. Infected houses are visited first by the Inspector, who supplies disinfectants, and subsequently by the Medical Officer of Health. The only isolation accommodation consists of a van and tent, but the attempt is made in all cases to secure home isolation. Disinfection of articles is by means of a Thresh's emergency apparatus, and of rooms by formalin, both spray and fumigation. Disinfection is carried out after cases of tubercular disease.

MALDON.

Medical Officer of Health—JOHN C. THRESH, M.D., D.SC.

Area in acres, 1901 census (land and inland water) 82,342.

Population, 1901 census ...	...	14,633
,, 1904 estimated	...	14,680
Deaths registered in the district	...	192
Corrections ...	Additions...	11
,, ...	Deductions...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	13·8 ...	14·7
Zymotic Death-rate	·6 ...	1·1
Infantile Mortality	104· ...	99·
Birth-rate	27·8 ...	25·6
Cases of Infectious Disease per 1,000 population ...	6·4 ...	5·9

The report is printed.

House Accommodation. Cottages with three decent bedrooms are much required in almost every parish. Many of the present houses with two bedrooms have really only one available, the other being too small, or otherwise unfit for such use. A few of the worst cases of overcrowding have been abated, but the large majority of such cases cannot be dealt with owing to lack of accommodation. Many of the cottages are of wood or lath and plaster, many are damp, and few of the older ones have any paved yard behind. Two have been closed as unfit for habitation. The modified Building Bye-laws were sanctioned early in the year, but it is too soon to estimate their effect. The six cottages erected at Bradwell under the Housing of the Working Classes Act are approaching completion. The total cost is estimated at £1,445, including site, one acre at £45, or £240 per cottage. (The loan sanctioned by the Local Government Board was £1,250.) They will let to barge men and others who can afford a higher rent than agricultural labourers. Other new cottages have been built in Bradwell, and it will now become one of the best housed parishes in the district.

Sewerage and Drainage. Tolleshunt D'Arcy, Tillingham, and Tollesbury have sewage systems, the two former disposing of the sewage by land irrigation. The coke beds of the Tollesbury works became choked with solids early in the year and had to be re-laid with fresh material. The new sewer from the Coastguard Station here acts badly on account of the insufficient supply of water for flushing. At Southminster the various outfalls terminating in ditches are a constant cause of

complaint, but a sewerage scheme would be expensive owing to the configuration. A small annual outlay on the cleansing of the ditches will postpone the necessity for such a scheme. Similar ditch-nuisances in some other parishes have been satisfactorily dealt with.

Excrement Disposal. Pail closets are extensively employed and comparatively few houses are without sufficient ground for the disposal of all waste matters. The heavy nature of the soil, however, in much of the district, makes it unsuitable for such disposal.

House Refuse. Scavenging is satisfactorily carried out by contractors at Heybridge Basin, Tollesbury, and Southminster. Bye-laws for removal of refuse, etc., are general, and though not strictly enforced, the nuisances arising from their neglect are not very many.

Supervised Premises. The two knacker's yards have given no cause for complaint. Nuisances arising from the mode of disposal of blood and offal in two slaughterhouses have been abated.

The dairies and cowsheds have been inspected and many in the Purleigh district have had a water supply laid on from the public main. The milk is produced under uncleanly conditions, which can probably be remedied only by the creation of a demand for clean milk, and not by the adoption of regulations. The district is no worse in this respect than the average.

Tent and van dwellers on Totham and Tiptree heaths have given rise to many complaints. The bye-laws are frequently disregarded and legal proceedings against these nomads are apt to be ineffective. It is hoped, however, that strict supervision by the Sanitary Inspector will lead to a decrease in their number.

Factory and Workshop Act. Workshops and outworkers' premises are visited during the systematic inspection. The bakehouses generally have been considerably improved. The

defects, chiefly of roofs and floors, have been remedied, and the places are kept tidier and cleaner.

Nuisances. Systematic inspection has not been carried out so well as usual, owing to changes in the staff. Nuisances should in future be more effectively dealt with under the new arrangement by which an inspector has been appointed to give his whole time to the work of inspection, and the supervision of new buildings.

ONGAR.

Medical Officer of Health—J. C. QUENNELL, M.R.C.S.

Area in acres, 1901 census (land and inland water) 47,236

Population, 1901 census ...	...	10,044
,, 1904 estimated...	...	10,044
Deaths registered in the district		188
Corrections	Additions ...	0
,, ...	Deductions ...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	11·7	14·9
Zymotic Death-rate ...	1·0	1·1
Infantile Mortality	59·	116·
Birth-rate	20·2	24·4
Cases of Infectious Disease per 1,000 population ...	4·4	6·2

The report is printed, and includes a report by the Inspector of Nuisances.

General Character of the District. There are no large centres of population, the district being purely agricultural.

House Accommodation. The model bye-laws for rural districts are in force. Plans have been passed under them for 43 new houses or alterations to old houses.

The problem of providing adequate accommodation for the working classes has not as yet been grappled with. In many districts the cottages are bad but no action is taken, as

the owners will not repair, while to condemn them would entail great hardship on the evicted tenants.

Sewerage and Drainage. The new sewage disposal works at Ongar and Abridge have given satisfactory results, and the river Roding at Abridge is now free from pollution. Some few houses in Chipping Ongar are still unconnected with the sewer and a certain amount of pollution of the Cripsey Brook results. Drainage schemes are required for Fyfield and Blackmore.

Supervised Premises. The bye-laws dealing with dairies, cowsheds and milkshops have not been rigidly enforced. A few persons have been registered under them.

Factory and Workshop Act. The Council has not had this subject under consideration, and therefore no register has been prepared.

Nuisances. The pollution of the Roding has ceased at Abridge, but continues at Fyfield, as does that of the Cripsey brook at Ongar. Smells arising from the septic tanks at Ongar sewage works are complained of.

Infectious Disease. An Isolation Hospital is still required. The tents provided in 1903 were utilised for the treatment of small-pox, and an additional tent had to be obtained. Some of these are now in bad condition. A disinfecting stove was purchased during the small-pox epidemic, and has since been used in connection with other infectious diseases.

ORSETT.

Medical Officer of Health—REA CORBET, M.R.C.S.

Area in acres, 1901 census (land and inland water)			39,939
Population, 1901 census ...		...	19,912
,, 1904 estimated .		...	21,900
Deaths registered in the district		...	341
Corrections ...	Additions ...		4
,, ...	Deductions ...		38

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·0 ...	15·1
Zymotic Death-rate	2·6 ...	2·5
Infantile Mortality	133· ...	131·
Birth-rate	33·9 ...	32·6
Cases of Infectious Disease per 1,000 population ...	4·9 ...	11·0

The report is printed.

Physical Features, etc. The underlying formation is chalk throughout. On the surface are found, at different parts of the district, chalk (Grays and Stifford), Thanet sands, Woolwich beds, London clay, Bagshot beds, brick earth, gravel, and alluvial deposits. The district is for the most part flat and low.

House Accommodation. Of late years many cottages have been condemned and closed, and many more put into a good state of repair. Overcrowding does not prevail to any great extent.

Sewerage and Drainage. A sewer is laid from Tilbury station to join the Grays system, draining the houses and buildings at Tilbury Docks and parts of Chadwell St. Mary and Little Thurrock. At Stanford-le-Hope and Corringham sewers and bacteria beds are in use. In no other parish is there a proper sewerage system. At Orsett the Union House and 50—60 cottages drain into a subsidence tank, from which the overflow runs into a ditch about 300 yards distant.

Tank vans are employed to empty the cesspools at South Ockendon, Stifford, West Thurrock, and Purfleet.

House Refuse. Public scavenging is in force at West Thurrock, Little Thurrock, Stifford, Tilbury Docks, and Stanford-le-Hope. Moveable galvanised dust-bins have been provided.

Supervised Premises. The slaughterhouses are in good order. Cowsheds (25) and dairies and milkshops (24) are frequently inspected, and all, except a few of the smallest, have been found to be in good order.

Factory and Workshop Act. There are 41 workshops, including 20 bakehouses, on the register. All have been inspected, and the very trifling defects found have been remedied at once.

Nuisances. A house to house inspection of about 200 houses at Aveley and the Docks has been made, and many defects brought to light and rectified. Over 400 inspections have been made elsewhere.

ROCHFORD.

Medical Officer of Health—F. DORRELL GRAYSON, M.R.C.S.

Area in acres, 1,901 census (land and inland water) 55,386

Population, 1901 census ...	...	14,565
,, 1904 estimated	...	15,679
Deaths registered in the district	...	250
Corrections ... Additions	...	0
,, ... Deductions	...	32

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	13·9	15·3
Zymotic Death-rate	1·6	1·8
Infantile Mortality	111·	106·
Birth-rate	28·1	29·4
Cases of Infectious Disease per 1,000 population ...	5·5	10·3

The report is printed.

House Accommodation. For various reasons many houses in the district are empty. Thus at Paglesham the diminished employment in the oyster industry, and at Hull Bridge the closure of the local brickfields, have led to considerable number of cottages remaining untenanted. A few tenements have been pulled down, but many new houses have been built.

Sewerage and Drainage. There is little progress to report in this direction. The parishes of Rayleigh, Hadleigh, South

Benfleet, Great Wakering, and Rochford urgently require drainage schemes.

Factory and Workshop Act. Many inspections have been made, but no sanitary defects discovered.

Nuisances. On inspection of the Eastwood School, by request of H.M. Inspector, various sanitary defects were discovered and reported upon to the Education Committee.

Several van owners on the Bohemian Estate at Eastwood were prosecuted for having neither dustbins nor proper receptacles for water, and small fines were inflicted. The locality is a remote one, and as favourable as could have been obtained for the purpose. The Council contemplates the adoption of more stringent bye-laws for dealing with these nomads.

The brickfields cause little or no nuisance, and fewer complaints have been received.

Infectious Disease. It is recommended that diphtheria antitoxin should be supplied gratuitously to District Medical Officers, both for prophylactic and curative purposes.

The new small-pox hospital at Nobles Green has been used for the isolation of two cases of the disease. It contains two wards, of three beds each. The well contains a good supply of water, but will require periodical cleansing.

ROMFORD.

Medical Officer of Health—A. WRIGHT, M.D.

Area in acres, 1901 census (land and inland water)			29,723
Population, 1901 census ...		...	19,018
,, 1904 estimated...		...	20,415
Deaths registered in the district		...	274
Corrections ...	Additions ...		21
,, ...	Deductions ...		2

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	14·4	14·5
Zymotic Death-rate	3·3	2·2
Infantile Mortality	174·	133·
Birth-rate	27·0	30·0
Cases of Infectious Diseases per 1,000 population ...	17·6	9·3

The report is printed.

Physical Features, etc. The district is undulating in character, and contains a number of small towns and large villages. The inhabitants are engaged for the most part in agriculture. The nature of the soil varies, London clay, brick earth, sand, gravel, and alluvium being met with in different places.

Sewerage and Drainage. The Rainham sewage system is well advanced in construction and that for Dagenham is also in hand. The insufficient ventilation of part of the Corbets Tey system is being remedied by the erection of several ventilating shafts. Frequent complaints are made of the bad smell given off at the outfall works. Sewage systems for Hornchurch and Harold Wood are also now in operation.

Excrement Disposal. Most of the cottages at Dagenham are supplied with pail closets which are emptied weekly by the Sanitary Authority. The soil, however, is saturated by years of cesspool overflow, and the village must remain in bad sanitary condition until the sewage scheme is completed. Much the same may be said of Rainham. Privies still form the chief provision for disposal at Havering.

House Refuse. Dust-bins are periodically emptied at Dagenham and Beacontree and Chadwell Heath.

SAFFRON WALDEN.

Medical Officer of Health—W. ARMISTEAD, M.B.

Area in acres, 1901 census (land and inland water) 59,975

Population, 1901 census ...	...	10,764
„ 1904 estimated ...	...	10,255
Total deaths registered in the district		156
Corrections ...	Additions ...	23
„ ...	Deductions ...	0

	1904.	Mean for 13 years, 1891—1903
Nett Death-rate	17·5 ...	14·9
Zymotic Death-rate	1·0 ...	1·0
Infantile Mortality	136· ...	94·
Birth-rate	22·2 ...	23·4
Cases of Infectious Disease per 1,000 population ...	2·3 ...	5·2

The report is printed.

Physical Features, etc. The geological formation is chalk, covered on the higher ground with boulder clay. The elevation varies from 120 to 450 feet. Most of the inhabitants are engaged in agriculture.

House Accommodation. In most parishes this is fairly adequate, but some of the old cottages are barely fit for habitation. The Council has had the question of providing additional accommodation for the working classes under consideration during the year. There is sufficient open space about most of the houses.

There are no building bye-laws in operation. Bye-laws for tents, vans, and sheds were adopted during the year.

Sewerage and Drainage. At Newport the surface and slop-water drains are defective and productive of nuisance. This can be remedied only by the provision of a proper sewerage system, which, however, would be unsatisfactory without a water supply for flushing purposes. At Great Chesterford complaints have been received of a nuisance at the outfall of

the sewer in the Flag End ditch. The sewer is, in consequence, to be extended for a distance of 200 yards.

Excrement Disposal. The types of convenience in vogue are the cesspit privy and the pail closet, but some of the larger houses have cesspools. Where defects are found in the old cesspit privies they are converted into pail closets. This improvement was carried out during the year in some of the schools.

House Refuse. There is no system of public scavenging in any part of the district. Refuse is removed by the occupiers and disposed of on their gardens or allotments, notice to do so being served where any nuisance is met with. Many cottages in Newport and Great Chesterford have no gardens and the occupiers have some difficulty in disposing of their refuse.

Supervised Premises. There are no lodginghouses in the district. The 12 slaughterhouses, 18 cowsheds, and 7 dairies and milkshops were inspected during the year and found in a fairly satisfactory condition. Regulations regarding dairies, cowsheds, and milkshops are in force.

Factory and Workshop Act. There are 114 workshops on the register, including 26 bakehouses. All have been inspected during the year. None of the special regulations relating to bakehouses have been contravened. One list containing the names of five outworkers has been received. Attention is paid to the conditions of homework.

STANSTED.

Medical Officer of Health—R. A. DUNN, M.D., D.HY.

Area in acres, 1901 census (land and inland water) 22,954

Population, 1901 census	...	...	6,888
,, 1904 estimated	...	...	6,888
Deaths registered in the district		...	98
Corrections	...	Additions ...	13
,,	...	Deductions ...	0

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	16·1 ...	13·0
Zymotic Death-rate	2·5 ...	·9
Infantile Mortality	112· ...	101·
Birth-rate	24·7 ...	22·95
Cases of Infectious Disease per 1,000 population ...	2·6 ...	5·5

The report is printed.

Sewerage and Drainage. There has been some trouble once or twice with the Liernur system, which is now in operation. The Council has decided to give a longer trial to the scheme before taking it over from the syndicate.

Supervised Premises. The cowsheds are kept in a fairly satisfactory condition. Slaughterhouses are regularly inspected.

Factory and Workshop Act. Bakehouses are regularly inspected, and a list is being prepared of the dates on which they were last limewashed, as it is difficult otherwise to be certain of the dates when this should be done. Other workshops and workplaces are visited from time to time by the Sanitary Inspector. They are fairly well kept.

Nuisances. Inspection of the district is regularly carried out and reports made monthly to the Council by the Sanitary Inspector.

Infectious Disease. The hospitals for small-pox and for other infectious diseases are the joint property of the Hadham and Stansted Rural and the Sawbridgeworth Urban District Councils. A steam disinfector is provided. Examination for diphtheria is made at the Isolation Hospital, Hertford.

TENDRING.

Medical Officer of Health—J. W. COOK, M.D.

Area in acres, 1901 census (land and inland water) 73,534

Population, 1901 census ...	...	20,984	
,, 1904 estimated	...	21,224	
Deaths registered in the district	...	281	
Corrections ...	Additions ...	0	
,, ...	Deductions ...	21	

	1904.	Mean for 13 years, 1891—1903.
Nett Death-rate	12·3	... 14·5
Zymotic Death-rate	·9	... 1·1
Infantile Mortality	96·	... 104·
Birth-rate	23·5	... 26·1
Cases of Infectious Disease per 1,000 population ...	3·3	... 4·15

The report is printed.

House Accommodation. The cottages generally are good, but in some villages many old and inferior ones remain. Building bye-laws are enforced under the supervision of the Surveyor. Except in the towns of Manningtree and Parkeston there is no restriction as to material of construction, but in all cases sanitary requirements are strictly attended to. Nineteen houses were represented as being unfit for habitation, and have been repaired, and two cases of overcrowding are being dealt with.

Sewerage and Drainage. There has been no change since last report. The proper drainage of the district comprising Manningtree, Mistley, and Lawford has not yet been carried out, nor that of Thorpe and Little Clacton. A Local Government Board inquiry about the Thorpe scheme is expected soon to be held. Drains are generally well constructed.

Excrement Disposal. Privies, pail closets, and cesspools are used where there are no sewers. There is great difficulty in securing the use of dry earth in the pail closets.

House Refuse. Removal is contracted for at Parkeston and at Manningtree, Lawford, and Mistley. The fixed ashpit is often found to be a nuisance, but it is difficult to get the portable iron ash-bin used.

Supervised Premises. The Medical Officer of Health has inspected and reported upon 48 dairies and cowsheds during the year, and has supervised the construction of four large new cowsheds. The general condition of these premises has been

improved. Limewashing notices are in future to be sent out twice yearly.

Factory and Workshop Act. The inspection of workshops has been "in a measure" attended to, and any sanitary defects found are quickly remedied. Lists of outworkers, containing in all 150 names, have been received, and 43 outworkers' premises have been inspected, but no serious sanitary defects were discovered. When infectious disease occurs in any of these houses the goods are disinfected.

Nuisances. The bursting of a drain near the well of the Tendring Hundred Water Company gave a good deal of trouble, but the matter was satisfactorily arranged.

Infectious Disease. The patient's house is visited at once by the Inspector, who obtains information, gives the necessary (printed) directions, and supplies disinfectants. Subsequently the Medical Officer of Health also visits and gives such directions as he may find necessary. Antitoxin is supplied in cases of diphtheria. Disinfection of rooms is carried out by formalin spray and fumigation, and of clothing, etc., by a Thresh's Emergency Steam Disinfector, which has recently been acquired. The offer is always made, and generally accepted, to disinfect after deaths from phthisis. Schools also are frequently disinfected.

The isolation hospital consists of a van and three tents, accommodating eight patients.

TABLE A.

DEATHS IN EACH DISTRICT CLASSIFIED ACCORDING TO DISEASES.

Corresponding to Table IV. of the Local Government Board

1904.

Names of Localities.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.	Fever. Typhus.	Fever. Typhoid.	Fever. Other continued.	Epidemic Influenza.	Cholera.	Plague.	Diarrhœa.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Malignant Disease, Cancer.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism. Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other causes.	All Causes.
URBAN.																																	
Barking	...	21	3	17	9	...	...	5	...	3	...	...	42	1	...	1	1	26	7	10	37	41	...	4	3	3	18	3	15	15	5	95	385
Braintree*	...	2	2	1	...	...	...	...	...	...	...	...	3	1	...	...	...	5	4	3	9	...	...	...	...	...	3	1	8	1	...	29	72
Brentwood	...	...	...	...	1	...	...	...	...	...	...	...	2	1	...	...	...	6	3	5	8	2	...	1	1	...	1	...	11	...	1	25	68
Brightlingsea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	3	3	2	...	2	...	...	...	...	7	2	2	35	60
Buckhurst Hill*	...	...	...	...	...	...	...	1	...	...	...	...	3	2	...	...	...	3	1	4	7	...	...	1	1	...	...	1	2	3	...	24	53
Burnham	...	...	...	...	1	...	...	...	...	...	...	...	4	...	...	...	...	4	...	5	6	...	...	...	2	...	1	...	2	3	1	14	43
Chelmsford	1	2	...	2	...	...	...	...	...	1	...	...	...	6	...	...	...	13	7	13	16	10	...	...	...	...	2	...	18	1	...	54	146
Chingford	...	1	...	...	...	...	...	...	...	...	...	...	7	3	1	...	...	3	3	5	...	3	...	...	1	...	4	2	4	2	...	8	47
Clacton*	...	...	...	5	3	...	...	...	...	2	...	...	4	4	...	2	...	12	3	12	4	4	...	...	5	...	5	...	7	4	...	31	107
Colchester	...	12	6	17	7	...	...	4	...	1	...	...	80	8	2	2	4	41	27	38	52	18	...	3	5	...	20	1	50	13	5	214	630
East Ham	...	56	10	24	47	2	...	14	...	9	...	...	189	45	1	8	10	139	58	71	114	160	...	1	14	2	69	4	91	27	6	441	1612
Epping†	...	...	...	3	...	...	...	...	...	...	...	...	2	...	...	...	...	2	1	3	1	1	1	...	4	1	...	...	5	2	...	20	46
Frinton	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	2	...	...	2	7
Grays†	...	1	...	...	...	...	...	1	...	1	...	...	16	3	1	3	2	17	8	9	4	15	1	3	4	...	15	...	15	7	3	50	179
Halstead*	...	...	1	...	3	...	...	...	...	...	...	...	1	...	1	...	...	5	...	6	7	2	...	...	1	...	3	...	11	1	3	46	91
Harwich*	...	1	1	3	1	...	...	2	...	...	...	...	1	...	...	...	...	12	5	4	16	13	...	4	2	1	4	...	14	5	...	53	142
Ilford†	...	17	5	8	10	...	...	4	...	1	...	...	53	43	4	1	1	33	22	28	34	28	2	5	6	...	23	1	40	15	4	146	534
Leigh-on-Sea	...	...	...	2	...	...	...	1	...	...	...	...	1	4	...	...	...	5	1	6	4	2	...	...	1	...	...	...	12	2	...	29	70
Leyton	...	25	6	44	14	1	...	10	...	6	...	...	186	...	1	3	...	125	45	61	?	?	...	...	...	...	49	...	97	22	8	?	1401
Loughton*	...	...	...	1	1	...	...	...	...	1	...	...	...	2	...	...	...	2	...	3	3	9	...	...	1	...	2	1	3	2	3	12	46
Maldon	...	3	...	1	...	...	...	1	...	1	...	...	...	1	...	...	...	5	2	4	9	1	1	3	2	...	1	...	13	1	...	30	79
Romford*	...	1	1	2	3	...	...	3	...	...	...	...	20	4	1	1	...	14	9	13	15	12	...	...	...	...	6	2	27	3	1	65	203
Saffron Walden	...	...	...	1	...	...	...	...	...	7	...	...	...	...	...	...	1	3	4	6	2	8	...	...	...	...	3	...	11	2	...	27	75
Shoeburyness	...	3	...	2	...	...	...	1	...	...	...	...	14	...	...	...	...	3	1	1	...	3	...	...	1	...	2	1	2	2	...	9	45
Southend-on-Sea	...	3	...	5	2	...	...	·2	...	2	...	...	84	18	...	1	2	50	21	30	38	18	...	...	15	2	29	6	50	9	6	203	596
Waltham H'ly Cr'ss†	...	...	...	2	...	...	...	...	...	3	...	...	3	...	...	...	...	11	6	5	4	5	...	...	2	...	3	...	12	...	2	34	92
Walthamstow	1	55	14	32	27	2	...	10	...	7	...	...	183	19	...	4	4	96	48	62	92	118	?	?	12	?	62	7	31	42	5	?	1330
Walton-on-the-Naze*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	3	1	...	...	1	...	1	1	4	...	...	7	22
Wanstead*	...	...	1	1	4	...	...	...	...	8	...	...	6	1	...	...	...	6	1	4	9	1	...	1	1	...	4	...	7	1	1	28	85
Witham	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	4	2	3	5	1	...	...	3	...	1	1	5	1	1	23	52
Wivenhoe*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	3	...	...	2	...	...	3	...	1	...	1	14	27
Woodford	...	1	...	4	3	...	...	2	...	...	...	...	14	5	...	...	...	6	10	11	8	6	2	4	1	1	20	...	9	6	...	57	170
Total	2	204	51	177	136	5	...	62	...	53	...	...	918	171	12	26	25	654	302	433	513	484	7	34	89	10	356	33	586	194	58	‡1825	8515
RURAL.																																	
Belchamp	...	...	...	7	...	...	...	1	...	...	...	...	...	...	1	...	...	2	1	7	6	...	...	...	1	...	3	2	12	...	...	34	77
Billericay	...	2	...	2	1	...	...	...	...	...	...	...	5	...	...	...	3	4	6	10	12	5	3	...	1	...	8	...	16	5	...	84	167
Braintree*	...	6	...	1	...	...	...	1	...	2	...	...	1	3	...	...	...	23	7	14	30	6	1	3	2	...	9	1	30	9	2	110	261
Bumpstead	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	5	2	1	...	...	1	...	...	...	6	1	1	25	47
Chelmsford	...	2	...	9	...	...	...	1	...	6	...	...	4	1	...	1	1	17	8	18	30	10	...	...	1	1	18	1	35	8	5	137	314
Dunmow	...	7	3	4	...	...	...	...	...	2	...	...	...	1	...	...	4	10	7	24	34	10	...	2	2	2	10	1	26	4	1	89	243
Epping	...	...	...	5	3	...	...	1	...	3	...	...	6	1	...	...	2	7	5	11	10	20	...	2	2	...	9	2	16	5	1	70	181
Halstead I.	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	4	5	2	...	...	...	...	2	...	8	1	...	21	47
Halstead II.	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	1	2	...	4	11	5	2	...	1	1	...	2	...	19	1	...	41	93
Lexden & Winstree*	...	1	1	6	5	1	...	...	...	1	...	...	4	5	...	1	...	27	4	17	24	6	...	...	3	...	15	...	28	6	...	99	254
Maldon	...	4	...	3	1	...	...	...	...	...	...	...	1	3	...	...	3	12	8	12	16	3	1	2	2	1	7	...	29	9	2	84	203
Ongar	...	1	...	6	...	...	...	1	...	2	...	...	2	...	1	...	...	10	2	7	19	3	...	...	...	...	...	1	11	3	1	48	118
Orsett	...	10	1	9	...	...	...	2	...	...	...	...	35	3	...	...	1	11	3	18	43	12	1	4	2	2	14	5	17	11	3	100	307
Rochford*	...	...	...	3	3	...	...	7	...	1	...	...	12	3	2	1	...	14	12	5	22	8	1	5	2	...	8	1	19	9	...	81	218
Romford	...	5	4	5	11	2	...	...	...	...	...	...	42	5	...	...	...	12	8	10	21	13	...	...	...	...	13	...	29	6	2	86	274
Saffron Walden	...	9	...	1	...	...	...	...	...	13	...	...	...	1	...	1	...	10	2	16	8	9	...	...	1	...	7	5	27	2	...	67	179
Stansted	...	13	...	1	1	...	...	1	...	2	...	...	1	...	...	1	1	6	...	8	11	7	...	2	...	...	4	...	8	2	...	42	111
Tendring*	...	1	3	5	2	...	...	1	...	1	...	...	8	7	...	...	...	22	7	16	27	5	...	4	3	1	14	2	29	9	4	110	281
Total	...	61	12	71	27	3	...	16	...	35	...	...	122	33	4	6	17	192	84	213	325	122	6	25	24	7	143	21	365	91	22	1328	3375

*Deaths registered in the district uncorrected.
†Nett deaths do not correspond with the number of deaths given in the Table.
‡Leyton and Walthamstow not included.

TABLE B.

DEATHS IN EACH DISTRICT CLASSIFIED ACCORDING TO AGES.

Corresponding to Tables I. & IV. of the Local Government Board.

AREA, POPULATIONS, 1891, 1901 & 1904, & No. OF BIRTHS.

Names of Locality.	Area in acres, land and inland water	Population, Census 1891.	Population, Census 1901.	Increase per cent. during decennium.	Decrease per cent. during decennium.	Population, middle of 1904. (estimated mid-year)	Persons per acre.	No. of Births.	Birth-rate.	No. of Deaths Nett.	Death-rate.	Deaths from all causes subjoined Ages.						Deaths under 1 year per 1,000 births.	Deaths per 1000 living at subjoined ages.			Death per cent. of Total Deaths, subjoined ages.			
												Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		1 and under 15.	15 and under 65.	65 and upwards.	Under 1.	1 and under 15.	15 and under 65.	65 and upwards.
URBAN.																									
Barking	3,803	14,301	21,547	50·7	...	26,500	7·0	896	33·8	385	14·5	129	87	23	12	89	45	144·0	10·7	6·9	76·1	33·5	28·6	26·2	11·7
Braintree	2,224	5,303	5,330	·5	...	5,330	2·4	133	25·0	82	15·4	11*a*	5*a*	4*a*	...*a*	17*a*	35*a*	82·7	...	...	..	15·3	12·5	23·6	48·6
Brentwood	460	4,949	4,932	...	·35	6,098	13·3	102	16·7	68	11·2	8	4	7	1	17	31	78·5	5·0	5·0	120·2	11·8	16·2	26·5	45·5
Brightlingsea	2,867	3,920	4,501	14·8	...	4,702	1·6	104	22·1	60	12·8	8	3	9	...	16	28	76·9	5·2	6·0	77·7	13·3	13·3	26·7	46·7
Buckhurst Hill	873	4,130	4,786	15·9	...	5,050	5·8	116	23·0	45	8·9	8*a*	3*a*	3*a*	2*a*	15*a*	22*a*	69·0	...	...	...	15·1	11·3	32·1	41·5
Burnham	4,517	2,360	2,919	23·7	...	3,250	·7	82	25·2	43	13·2	8	6	2	1	14	12	73·2	7·3	8·1	60·0	18·6	18·6	34·9	27·9
Chelmsford	2,308	11,008	12,580	14·3	...	13,150	5·7	336	25·6	146	11·1	22	9	4	3	47	61	65·5	3·5	6·0	73·2	15·1	8·9	34·2	41·8
Chingford	2,808	2,737	4,373	59·8	...	5,030	1·8	103	20·5	47	9·3	13	7	1	3	15	8	126·2	5·0	5·8	41·9	27·7	17·0	38·3	17·0
Clacton	4,069	3,584	7,456	108·0	...	7,704	1·9	192	24·9	111	14·4	22*a*	7*a*	8*a*	3*a*	37*a*	30*a*	114·6	...	...	...	20·6	14·0	37·4	28·0
Colchester	11,333	34,559	38,373	11·0	...	39,700	3·5	1,033	26·0	630	15·9	182	74	20	33	162	159	176·2	8·5	7·5	88·4	28·9	14·9	31·0	25·2
East Ham	3,326	32,712	96,018	193·5	...	116,902	35·1	3,717	31·8	1,612	13·8	575	271	74	58	405	229	154·7	8·1	6·8	85·9	35·7	21·4	28·7	14·2
Epping	1,420	3,223	3,789	17·6	...	4,013	2·8	96	23·9	47	11·7	9*b*	4*b*	1*b*	2*b*	15*b*	15*a*	104·2	...	...	...	19·6	10·9	36·9	32·6
Frinton	408	75	644	758·7	. .	850	2·1	19	22·2	7	8·2	2	...	...	...	3	2	105·3	...	...	...	28·6	...	42·8	28·6
Grays	1,359	12,397	13,834	11·6	...	15,250	11·2	443	29·0	179	11·7	60	12	9	6	55	37	135·4	3·4	7·3	87·9	33·5	11·7	34·4	20·7
Halstead	647	6,056	6,073	·3	...	6,100	9·4	128	21·0	75	12·3	11*a*	7*a*	2*a*	3*a*	14*a*	54*a*	85·9	...	...	...	12·1	9·9	18·7	59·3
Harwich	1,541	8,202	10,070	22·8	...	10,520	6·8	292	27·8	153	14·5	37*a*	25*a*	6*a*	13*a*	40*a*	21*a*	126·7	...	...	...	26·1	21·8	37·3	14·8
Ilford*c*	8,496	10,913	41,234	277·8	...	59,700	7·0	1,548	28·6	563	10·9	198*b*	70*b*	18*b*	18*b*	130*b*	100*b*	127·9	...	...	..	37·1	16·5	27·7	18·7
Leigh-on-Sea	1,527	2,108	3,667	74·0	...	4,773	3·1	120	25·1	70	14·7	18	4	2	3	25	18	150·0	3·9	9·7	72·0	25·7	8·6	40·0	25·7
Leyton	2,594	63,106	98,912	56·7	...	104,000	40·1	3,198	30·75	1,401	13·5	453	178	34	50	404	282	141·7	6·2	7·2	67·7	32·4	15·1	32·4	20·1
Loughton	3 961	3,880	4,730	21·9	...	5,100	1·3	105	20·6	46	9·0	9	4	...	1	19	13	85·7	2·6	6·3	56·3	19·5	8·7	43·5	28·3
Maldon	3,028	5,397	5,565	3·1	...	5,618	1·9	144	25·6	79	14·1	11	13	1	4	19	31	83·3	8·4	6·8	68·1	13·9	17·7	29·1	39·2
Romford	5,630	10,473	13,656	30·4	...	14,700	2·6	418	28·4	148*d*	10·1*d*	49*a*	10*a*	6*a*	7*a*	63*a*	68*a*	117·2	...	...	...	24·1	7·9	34·5	33·5
Saffron Walden	7,502	6,104	5,896	...	3·4	5,833	·8	113	19·4	75	12·9	12	2	2	2	21	36	115·0	2·3	6·5	69·6	16·0	5·3	44·0	34·7
Shoeburyness	1,036	2,990	4,081	36·5	..	4,322	4·2	138	31·9	45	10·4	19	8	2	2	9	5	137·7	7·5	4·0	56·2	42·2	22·2	24·5	11·1
Southend-on-Sea	5,172	13,242	28,857	117·9	...	41,944	8·2	1,007	24·0	596	14·2	180	51	10	24	192	139	178·7	5·1	7·9	78·6	30·2	10·2	36·3	23·3
Waltham Holy Cross ...	11,017	6,066	6,549	8·0	...	6,730	·6	164	24·4	8	13·1	17*a*	3*b*	6*b*	5*b*	30*b*	31*b*	103·7	...	...	...	18·5	9·8	38·0	33·7
Walthamstow	4,343	46,346	95,131	105·3	...	111,282	25·6	3,649	32·8	1,330	12·0	496	197	69	47	295	226	135·9	6·6	5·3	80·3	37·3	20·0	25·7	17·0
Walton on-Naze	2,065	1,586	2,014	27·0	..	2,089	1·0	43	20·6	20	9·6	2*a*	0*a*	1*a*	1*a*	9*a*	10*a*	46·5	...	...	...	9·1	4·5	40·9	45·5
Wanstead*c*	1,679	7,043	9,179	30·3	...	10,445	6·2	203	21·3	89	9·3	19*a*	4*a*	3*a*	6*a*	21*a*	32*a*	93·6	...	...	...	22·4	8·2	31·8	37·6
Witham	3,706	3,444	3,454	·3	...	3,520	·9	85	24·1	52	14·8	5	...	2	4	20	21	58·8	1·7	11·8	76·6	9·6	3·9	46·1	40·4
Wivenhoe	1,564	2,441	2,560	4·9	...	2,500	1·6	49	19·6	27*a*	10·8*a*	4*a*	4*a*	1*a*	...*a*	8*a*	10*a*	102·0	...	...	...	14·8	18·5	29·6	37·1
Woodford	2,161	11,024	13,798	25·2	...	14,699	6·8	417	28·4	170	11·6	54	22	6	6	28	54	129·5	6·5	3·6	83·3	31·8	16·5	20·0	31·8
Total	109,439	345,679	576,508	66·8		667,404	6·1	19,193	28·8	8,489		2,651	1,094	332	319	2,254	1,865	138·1	6·4	6·4	74·0	31 1	16·8	30·2	21·9
RURAL.																									
Belchamp	26,500	5,719	4,847	...	15·3	4,847	·18	85	17·5	77	15·9	13	4	1	3	19	37	152·9	3·3	7·8	84·1	16·9	6·5	28·6	48·0
Billericay*c*	49·391	15,606	17,504	12·2	...	17,504	·31	353	23·2	167	11·0	35	15	8	3	36	70	99·2	...	...	...	20·9	13·8	23·4	41·9
Braintree	62,355	19,734	18,109	...	8·2	18,106	·29	379	20·9	247	13·6	33*a*	11*a*	6*a*	16*a*	65*a*	130*a*	87·1	...	...	...	12·7	6·5	31·0	49·8
Bumpstead	11,874	2,886	2,541	...	11·3	2,437	·21	57	23·4	47	19·3	8	1	...	1	7	30	140·4	1·3	5·9	118·1	17·0	2·1	17·0	63·9
Chelmsford	83,849	23,174	23,717	2·3	...	23,920	·29	534	22·3	314	13·1	46	21	10	12	82	143	86·1	4·3	6·5	78·4	14·6	9·9	29·9	45·6
Dunmow	73,503	16,674	15,705	...	5·8	15,440	·21	340	22·0	243	15·7	33	21	9	10	41	129	97·0	6·2	5·8	86·4	13·6	12·3	21·0	53·1
Epping	39,055	12,167	12,783	5·1	...	12,782	·33	315	24·6	181	14·2	40	11	9	7	45	69	123·8	5·0	6·8	81·8	22·1	11·1	28·7	38·1
Halstead I.	18,200	4,764	4,481	...	5·9	4,593	·25	99	21·6	47	10·2	7	...	1	1	9	29	70·7	1·9	4·4	99·6	14·9	2·1	21·3	61·7
Halstead II.	20,512	6,049	5,695	...	5·9	5,695	·28	105	18·4	93	16·3	11	4	1	2	15	60	104·8				11·8	5·4	18·3	64·5
Lexden and Winstree ...	69,485	19,281	18,586	...	3·6	19,165	·28	446	23·3	250	13·0	46*a*	18*a*	11*a*	8*a*	64*a*	107*a*	103·1	...	...	...	18·1	11·4	28·4	42·1
Maldon	82,342	15,741	14,633	...	7·0	14,680	·18	408	27·8	203	13·8	26	13	12	6	42	104	63·7	5·3	5·7	82·8	12·8	12·3	23·7	51·2
Ongar	47,236	10,557	10,044	..	4·9	10,044	·21	203	20·2	118	11·7	12	15	2	4	33	52	59·1	5·2	6·4	69·0	10·2	14·4	31·3	44·1
Orsett	39,939	14,913	19,912	33·5	...	21,900	·55	743	33·9	307	14·0	99	38	6	15	71	78	133·2	5·9	6·7	83·1	32·2	14·3	28·1	25·4
Rochford	55,386	11,931	14,565	22·1	...	15,679	·28	441	28·1	218	13·9	48	12	11	11	60	76	111·1	4·5	7·8	70·8	22·0	10·6	32·6	34·9
Romford	29,723	14,326	19,018	32·8	...	20,415	·69	551	27·0	293	14·4	96*a*	30*a*	17*a*	8*a*	53*a*	70*a*	174·2	. .	...	...	35·0	17·2	22·3	25·5
Saffron Walden	59,975	12,458	10,764	...	13·6	10,255	·17	228	22·2	179	17·5	31	16	5	4	57	66	136·0	6·4	10·5	70·1	17·3	11·7	34·1	36·9
Stansted	22,954	6,908	6,888	... .	·3	6,888	·30	170	24·7	111	16·1	19	10	8	3	22	49	111·8	8·4	6·3	84·6	17·1	16·2	22·5	44·2
Tendring	73,131	19,904	20,340	2·2	. .	21,224	·29	498	23·5	260	12·3	48*a*	17*a*	4*a*	12*a*	65*a*	137*a*	96·4	...	...	...	17·0	7·4	27·2	48·4
Total	865,410	232,792	240,132	3·2		265,574	·28	5,955	24·2	3,355		651	257	121	126	786	1436	109·3	4·9	6·3	77·0	19·3	11·2	27·0	42·5

a. Deaths registered in the district, uncorrected.
b. Numbers do not correspond with net total.
c. In these districts rates are not calculated upon the total population, but on this less certain institutional populations.
d. See note on p. xl.

(Corresponding to Table I

NUMBER OF CASES OF DISEAS
NUMBER REM

Names of Localities.	Cases Notified in each Locality.										
	Small-pox.	Cholera.	Diphtheria.	Membranous Croup.	Erysipelas.	Scarlet Fever.	Typhus Fever.	Enteric Fever.	Relapsing Fever.	Continued Fever.	
URBAN.											
Barking	...	...	145	2	23	94	...	18	...	...	
Braintree	2	...	...	...	...	78	...	1	...	...	
Brentwood	...	...	29	...	2	7	...	1	...	...	
Brightlingsea ...	...	...	...	...	1	4	...	3	...	...	
Buckhurst Hill ...	...	...	...	...	2	11	...	1	...	...	
Burnham	...	...	7	...	8	1	...	...	...	...	
Chelmsford ...	4	...	2	..	9	20	...	2	...	...	
Chingford	...	...	...	...	4	21	...	...	...	...	
Clacton	...	...	15	...	5	34	...	...	...	..	
Colchester	1	...	56	...	38	257	..	17	...	...	
East Ham	2	...	327	12	132	711	...	59	...	2	
Epping	...	...	...	...	4	1	.	...	..	...	
Frinton	...	...	...	...	...	...	...	...	...	...	
Grays	1	..	11	...	12	74	...	17	...	...	
Halstead	...	...	52	...	9	9	...	...	...	...	
Harwich	2	..	2	...	6	92	...	10	...	...	
Ilford	11	...	174	7	56	224	...	29	...	3	
Leigh-on-Sea ...	...	...	2	...	...	1	...	6	...	...	
Leyton	10	...	151	3	109	497	...	48	...	3	
Loughton	...	...	6	...	...	1	...	1	...	...	
Maldon	...	...	8	2	5	27	...	3	...	...	
Romford	...	...	45	...	15	29	...	4	...	...	
Saffron Walden ...	...	...	1	...	6	18	...	...	...	..	
Shoeburyness ...	..	...	2	...	1	...	...	14	...	...	
Southend-on-Sea ...	1	...	76	1	22	49	...	18	...	...	
Waltham Holy Cross	...	...	3	..	8	6	...	...	...	...	
Walthamstow ...	49	...	177	13	143	527	...	56	...	...	
Walton-on-the-Naze	...	...	1	...	1	2	...	1	...	...	
Wanstead	...	...	25	...	6	21	...	1	...	...	
Witham	...	...	...	...	...	12	.	5	...	...	
Wivenhoe	...	...	6	...	1	11	...	...	...	...	
Woodford	...	...	33	...	9	30	...	9	...	...	
Total ...	83	...	1356	40	637	2869	...	324	...	8	
RURAL.											
Belchamp	...	...	...	1	3	11	...	1	...	...	
Billericay	..	...	24	...	16	25	...	7	...	...	
Braintree	2	...	1	...	9	69	...	5	...	...	
Bumpstead	...	...	8	...	6	1	...	...	...	...	
Chelmsford ...	1	...	9	...	6	48	...	5	...	...	
Dunmow	1	...	6	...	11	60	...	6	...	...	
Epping	...	...	28	...	18	31	...	1	...	...	
Halstead No. 1 ...	...	...	3	...	1	3	...	...	...	...	
Halstead No. 2 ...	...	...	1	...	5	29	...	...	...	...	
Lexden & Winstree...	...	...	45	1	13	36	...	2	...	...	
Maldon	...	...	9	...	6	60	...	19	...	...	
Ongar	16	...	10	1	3	9	...	4	...	...	
Orsett	5		13	..	24	56	...	9	...	...	
Rochford	2	...	6	1	15	26	...	36	...	...	
Romford	2	...	179	...	19	146	...	12	...	...	
Saffron Walden ...	...	...	...	...	7	11	...	6	...	...	
Stansted	..	..	7	...	6	4	...	1	...	...	
Tendring	...	...	15	...	7	40	...	7	...	...	
Total... ...	29	...	364	4	175	635	...	121	...	...	

LE C.

the Local Government Board.)

NOTIFIED IN EACH DISTRICT AND ED TO HOSPITAL.

4.

Plague.	Totals.	Number of Cases Removed to Hospital from each Locality.												
		Small-pox.	Cholera.	Diphtheria.	Membranous Croup.	Erysipelas.	Scarlet Fever.	Typhus Fever.	Enteric Fever.	Relapsing Fever.	Continued Fever.	Puerperal Fever.	Plague.	Totals.
...	285	...	...	113	1	2	71	...	12	...	...	...	...	199
..	81	2	...	...	...	...	43	...	...	...	...	...	...	45
...	39	...	...	20	...	...	2	...	...	...	...	...	...	22
...	8	...	...	...	.	...	...	...	...	...	...	...	...	...
...	14	...	..	..	...	...	6	...	...	...	...	...	...	6
...	16	...	...	...	...	...		...	...	...	...	...	...	...
..	37	4	...	1	...	...	15		...	...	...	...	...	20
...	26	...	...	...	...	...	1			...	...	...	...	1
...	54	...	...	11	...	1	28	...	...	...	...	...	...	40
...	372	1	...	30	...	...	154	...	10	...	...	...	...	195
..	1256	2	...	214	5	8	334	...	41	...	1	2	...	607
...	5	..	...	...	...	...	1	..	...	...	...	...	...	1
...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
...	117	1	...	4	...	...	33	...	15	...	...	...	...	53
...	70	...	...	...	...	...	...	...	...	...	...	...	...	?
...	113	2	...	...	...	...	55	...	6	...	...	...	...	63
...	508	5	...	74	6	...	140	...	7	...	2	...	...	234
..	9	...	...	...	...	...	...	...	...	...	...	...	...	...
...	828	10	...	56	2	7	247	..	23	...	...	6	...	351
...	8	...	...	...	...	...	...	...	..	...	...	...	...	?
...	45	...	...	5	1	...	18	...	1	...	...	...	...	25
...	94	...	...	45	...	15	29	..	4	...	..	1	...	94
...	25	...	...	1	...	...	15		...	...	...	...	...	16
...	17	...	...	2	...	...	...	...	...	...	...	...	...	2
...	167	1	...	43	...	...	40	...	14	...	...	...	...	98
...	17	...	...	1	...	1	4	...	...	..	...	...	...	6
...	975	49	...	115	4	1	221	...	32	...	...	9	...	431
...	5	...	...	...	...	..	...	...	...	...	...	...	...	...
...	53	...	..	1	...	...	10	...	...	...	...	...	...	11
...	17	...	...	...	...	...	...	...	...	...	...	...	...	...
...	18	...	...	...	...	...	...	...	...	...	...	...	...	...
...	81	...	...	34	...	1	24	...	3	...	...	...	...	62
...	5360		...							...				
...	17	...	...	...	...	...	...	...	...	...	...	...	...	...
...	73	...	...	18	...	...	20	...	2	...	...	...	...	40
...	86	2	...	...	...	...	27	...	1	...	...	...	...	30
...	15	...	...	...	...	...	...	...	...	...	...	...	...	...
...	69	1	...	1	...	...	26	...	...	...	...	...	...	28
...	84	...	...	...	...	...	...	...	...	...	...	...	...	...
...	79	...	...	19	...	...	26	...	...	...	...	...	...	45
...	7	...	...	2	...	..	...	...	...	...	..	...	...	2
...	35	...	...	1	...	...	22	...	...	...	.	...	...	23
...	98	...	...	11	...	..	...	...	...	...	...	...	...	11
...	94	...	...	...	...	...	12	...	2	...	...	...	...	14
...	44	16	...	...	...	...	..	..	...	...	...	...	...	16
...	108	5	...	6	...	...	28	...	5	...	...	...	...	44
..	86	2	...	...	...	...	...	...	...	...	...	...	...	?
...	360	2	...	95	...	...	144	...	4	...	...	...	...	245
...	24	...	...	...	...	...	7	...	2	...	...	...	...	9
...	18	...	...	7	...	...	1	...	...	...	...	...	...	8
...	69	...	...	...	...	...	...	...	1	...	...	...	...	1
...	1366													